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FOR REFERENCE

Not to be taken out

The Journal

OF THE

United Service Institution of India.

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The views expressed in this Journal are in no sense official, and the opinions of contributors in their published articles are not necessarily those of the Council of the Institution.

EDITORIAL.

Since the Great War there has been a remarkable growth of national consciousness in many countries where such feelings were not formerly prominent. This change is particularly marked where power has been gained by a dictator, for an absolute ruler is always tempted to adopt a truculent attitude towards foreigners in the hope that it will unite his own people in support of what must be to many an unpopular form of government. Conspicuous amongst such countries has been Persia, and Great Britain's peculiar position in the Persian Gulf has offered ample opportunity for indulgence in the spectacular, applause-gaining and up to the present not very dangerous sport of twisting the lion's tail.

In the Persian Gulf for the past 150 years Great Britain has performed the role of policeman—a role which incidentally no one else was either able or willing to undertake and which has benefitted every nation trading into the Gulf, Persia above all others. Gradually and without protest from anyone, Great Britain acquired certain privileges to enable her to carry out her duties. The privileges are in themselves of no vast importance and they are of long standing, but to newly awakened Persian nationalism they constitute a slight to Persian sovereignty.

Within the last few years Britain has voluntarily abandoned certain of these privileges. Armed Consular escorts have been withdrawn; the Indo-European telegraph system and certain wireless

stations have been handed over without compensation. In addition the Imperial Airways route, in deference to Persian wishes, has been transferred to the Arabian side of the Gulf, and the railway to Duzdap, run as part of the North-Western Railway system of India, has been shut down, thus removing a constant cause of petty friction. After these and other concessions to Persian feeling had been made there still remained the questions of the small British naval shore establishments in the Persian Islands of Basidu and Henjam, the location of the Persian Gulf Residency at Bushire, and the Persian debt to Britain. Of these the retention by the navy of the recreational and other facilities at Henjam is the most important, but Great Britain has no territorial ambitions in Persia and a settlement of these outstanding questions, satisfactory to both parties, should not be difficult. Unfortunately Persia has brought forward at various times fantastic counter-claims to certain islands owned by Arab Sheiks under British protection and to Bahrein. Britain does not own these islands, whose rulers and people most strongly refute the Persian assertion, and it would be grossly unjust to abandon those whom we have solemnly promised to protect. After years of negotiation the position has been reached, as it so often is in treating with an Oriental Power, when Britain can offer no further concessions and the Persian Government fears that a withdrawal of their extravagant claims will lead to a loss of face in their own country. This position, difficult enough in itself, was immeasurably aggravated by the sudden announcement that the Persian Government had cancelled its agreement with the Anglo-Persian Oil Company.

In these hard times Persia's desire to increase the already substantial benefits she obtains from the Company is easily understandable, but an agreement whether individual or national cannot be cancelled because one party would now like more advantageous terms than formerly satisfied them. The sums due to Persia—16 per cent. of the Company's nett profits—have been paid with unfailing regularity. The concession, which has another 28 years to run, gives no authority for cancellation before its term expires, but allows of arbitration on any disputed point. All this Persia ignored and it is useless to argue that the affair is a mere dispute between a Government and a private company operating in that Government's territory. The facts that the Company is a purely British one, that the British Government is its majority shareholder, that in addition many millions of privately

invested British money are at stake, left Great Britain no alternative but to protect her own and her subjects' rights. It was obviously time, for everybody's sake, that a little stiffness should be imparted to our, it must be confessed, rather spineless attitude towards Persia. This has now been done in the British note of protest which, while offering arbitration, made it quite clear that, should any interference with the Company's normal operations be attempted, all necessary steps would be taken to protect its interests and property, and the lives of its British and Indian employees. This could only mean that in the last resort Britain would be prepared to land troops to safeguard the Company's personnel and installations and it is well that Persia should realize that even the mild British lion will eventually show a tooth if its tail is twisted beyond a certain limit. The actual cancellation was probably the impulsive act of the Shah himself and the wholesome dread in which he is held by all his Ministers is enough to prevent any of them pointing out the legal, moral and practical objections to his act. Even so the prompt and plain nature of the British announcement came probably as a shock to a Persian Government that had been living recently in a somewhat unreal atmosphere where lions never hint that they have teeth.

However there is no call for sabre-rattling—nor indeed has there been any. Sooner or later the Persian bluff had to be called on some point, and the illegal and unjustifiable cancellation of this concession is as good a one on which to do it as could be found. Persia has announced that she will take no action until the result of the reference to the League of Nations is declared and in this at least she is wise. Unless she is so supremely ill-advised as to indulge in provocative action, some face saving device should be discovered which will enable her to retrace a hasty step that must be already regretted. With a sigh more than one ardent young officer of the Army in India puts away the map of Persia and turns to prepare his Individual Training Programme for the hot weather.

* * * * *

The Round Table Conference and the Disarmament Conference have led to a revival in certain quarters of the attacks on Indian Defence expenditure. The politicians who tilt at the Army Budget too often take the short sighted view that all Defence Expenditure is "non-productive" and cannot be classed as "nation building." A realization of fundamental facts would show them that the Fighting Services of India produce the most essential

Indian De-
fence Costs.

of all commodities—Security, and that there is no institution in India that has achieved so much practical nation building as the Indian Army.

Apart from this, criticisms are based mainly on two allegations, first, that the total cost is too high, and, second, that really serious efforts have not been made to reduce it. Comparisons are drawn between the expenditure of other nations and of India. Now it is an open secret that many nations do deliberately camouflage their defence expenditure by showing portions of it in their Budgets as incurred under other heads. For instance, one nation recently spent £200,000 on horses for its army but showed the cost under 'agriculture'; another maintains large second line formations under the heading of 'Education'; barracks and even fortifications are paid from the Public Works Budget; there is no end to the subterfuge employed to conceal the real total expended on Defence. Few nations would think of charging to their military estimates such items as children's education, transportation by Government railways, custom duties on military material, war pensions, or Frontier road construction and maintenance. Yet all these and a good many more are included in the Indian Military Budget. It is this difference in budgetary honesty between the countries of the Empire and certain foreign nations that, as the League of Nations has found, makes comparison between published budget figures apt to be misleading. Even so a contrast between these figures is not nearly so unfavourable to India as many people would have us believe.

The figures on which the truest estimate of relative Defence Expenditure can be based are :—

- i. The cost per head of population.
- ii. The proportion of the total national revenue which is expended on Defence.

The latest available figures are illuminating :—

		Cost per head in Rupees.	Percentage of Defence Expen- diture to Total Revenue.
United Kingdom	..	27·5	12·6
France	..	36·4	22·5
Italy	..	17·1	26·7
United States	..	18·5	25·1
Japan	..	10·0	21·0
India	..	1·3	22·4

It will be seen that, even allowing for a low taxable capacity, the cost per head in India is remarkably small and it is growing smaller. At the same time the proportion of revenue devoted to Defence is, compared with other countries, few of which are faced with such immediate internal and external military problems as India, by no means out of the ordinary.

The second charge, that no serious efforts have been made to reduce the cost of Defence, is clearly refuted by an examination of the Defence Budgets of the last ten years. In 1922-23, when conditions after the Great War and the Third Afghan War were returning to normal, the nett Defence expenditure was Rs. 65·27 crores ; in 1931-32 it was Rs. 50·73 crores ; and in the present year, 1932-33, it is estimated at 46·74 crores. This means that in ten years a reduction of over 28 per cent. has been effected. No other nation in the world has reduced its Defence expenditure in this period to such an extent, and it would be well to remember the fact.

* * * * *

That this vast reduction in expenditure has been achieved without loss of efficiency has been possible only because of the unselfish co-operation of all officers of the Fighting Services. Without their aid either the economies would not have been effected or they would have bred discontent and deterioration. Try as it might, Army Headquarters could not possibly prevent the effects of such widespread reductions from falling on individuals. The drastic cuts in the Army Budget meant the disappearance of units to which officers had devoted their lives, the compulsory retirement of many in mid-career, impaired prospects of command for those who remained, fewer officers to do more work, a scaling down of allowances. Yet all these and a great deal more officers accepted loyally. Indeed it is admitted that the wholehearted efforts of the Fighting Services to effect economies and the success that has attended those efforts have been unequalled. Even the temporary cut in pay, which has inflicted more hardship on officers than is often realized, was accepted in an equally admirable spirit.

Now, as the time draws near when Government must make up its mind whether this cut in pay is to be continued for another year or not, the air is full of whispers. The cut is to be restored ; it is not to be restored for another year ; it is to be made permanent ; five per

cent. only is to be restored ; it is to be restored but a Machiavelian Finance Department is to mulct the unfortunate officer an equal amount by increased income-tax. So the rumours fly. Actually, of course, no final decision has yet been reached—everything depends on the financial position a few months hence and no one can guarantee accurately to predict what that will be. There are however certain factors which are already plain. First, in favour of restoration are the facts that India's financial situation is very much better than it was a year ago, revenue is coming in freely, many staple industries show signs of improvement, India has weathered the universal depression better than most countries, the political situation has immeasurably improved, and there is every prospect of a balanced budget even with the restored pay. Against restoration there are the financial difficulties of some of the Provinces, who have little hope of balancing their budgets, and of certain Government Services, notably the Railways. It is argued that it would be impolitic and perhaps unjust to restore the pay of officers of the Central Government and not of those in the Provinces, or of certain Services and not of others. All or none is the cry.

This argument requires careful examination. No one, least of all any officer of the Fighting Services, wishes to benefit at the expense of his confrère of another Service, but there is no question of doing this. Even if the pay of one Service is restored and that of another remains reduced the unlucky Service is no worse off than before. Indeed it is in a better position to claim restoration than it would be if the other Services had not received their pay back. Again Government's object must be economy, and, as the Army has shown, it is best achieved when all officers of a Service co-operate willingly to this end ; what better guarantee that such co-operation will be forthcoming than to offer a restoration of pay conditional on a general reduction of expenditure.

At present there seems no insuperable obstacle in the way of a restoration of all pay in the next financial year, but, should it for any reason be decided that it is impossible to give back their pay to certain Services, it is to be hoped that Government will not be so short sighted as to extend this decision to all Services. The Fighting Services, as an example, might fairly claim other treatment. Surely they deserve some material reward for the immense economies they have already and are still effecting. India is entering upon a period of

great and far reaching changes in every sphere of her life. Whether these changes will be allowed to develop along the lines of rapid and peaceful progress depends in the last resort of the efficiency and reliability of the Army, and these in turn depend absolutely on the officers now serving. Would it be wise to continue a cut in pay which, if maintained, as a year's experience has shown, will by involving officers in financial difficulties, undermine their contentment and most adversely affect their efficiency? It would be the falsest of economies.

* * * * *

An analysis of the results of the 1932 Staff College Entrance Examination proves of undoubted interest and may be of some value, though deductions based on figures such as these are by no means infallible.

618 officers sat for the examination and of these 198 or 32 per cent. qualified. The chief arms of the British and Indian Armies acquitted themselves as follows:—

			Number taking the Examination.	Percentage who qualified.
Royal Signals	..	..	24	62.5
Royal Engineers	..	..	59	47.4
Royal Artillery	..	..	102	38.2
Indian Infantry	..	..	125	34.4
British Cavalry	..	..	17	23.5
British Infantry	..	..	211	23.2
Indian Cavalry	..	..	18	16.7
Royal Tank Corps	..	..	16	12.5
Indian Army Service Corps	..	..	8	12.5
Royal Army Service Corps	..	..	4	Nil.

The first thing that strikes one is that at the head of the list with the highest percentage of qualifications come the three arms trained at Woolwich. Is it safe to deduce from this that the education there given is as superior to that at Sandhurst as the figures would seem to imply? Possibly not, for it must be remembered that these officers completed their initial military education several years ago, and since then there have been very wide changes in the Sandhurst curriculum. Perhaps ten years hence the distinction between the two institutions in this examination will not be so marked. Again the difference may

not be due so much to variation in the instruction received as Cadets as it is to what happens to the young officer in the first few years of his service. Indeed it seems that here the true cause of the difference is to be found. All Royal Engineer subalterns and many of the Royal Signals follow their cadet training by a University Course which not only raises their technical standard but improves immeasurably their general education and capacity for study. Reformers may seize upon these figures as further evidence that a year's University education would be better training for all our future officers than eighteen months as cadets. In addition the Royal Signals have unequalled opportunities in their ordinary training to become acquainted with the working of other arms and with control and staff work in mixed formations. Similarly but to a lesser degree the Gunner also has a better chance than most other arms of obtaining a broader view during training—he has to be taken more fully into the confidence of superior commanders. Finally all three, Signallers, Sappers and Gunners have in their every day work to keep themselves abreast of rapidly advancing technical knowledge, and this in itself is a great mental stimulant. The position of these three arms at the top of the list and the order in which they appear are thus very much what one would have predicted, though the Royal Corps of Signals surely deserves congratulation on the striking use it has made of its advantages.

It is gratifying to find that, first of the non-Woolwich arms, and treading very closely on the heels of the Gunners, come the Infantry of the Indian Army. What special advantages they have had to enable them to achieve this creditable distinction it is hard to say. The fewness of British officers in Indian Battalions, the extent to which they have personally to supervise administration, the languages they have to learn, the wider responsibilities they have to accept compared with British Service officers of similar seniority, all reduce their opportunities for study. One suspects that the cause of their success is to be found in the simple fact that once again a determination to overcome obstacles has overcome them. There is a considerable drop between Indian Infantry and British Cavalry and Infantry and still more to Indian Cavalry. It would be interesting to speculate why British Infantry have a lower percentage of qualifications than Indian, and as to why in the Indian Army the Infantry should lead the Cavalry and the position be reversed in the British Army—interesting but possibly rash.

It is a little surprising at first sight to find that a British Service officer in India has a somewhat higher expectation of passing the examination than one serving elsewhere. The figures for the percentage of qualifications to entries are:—

		In India.	Elsewhere.
British Cavalry	.. ..	20·0	25·0
Royal Artillery	.. ..	45·0	36·6
Royal Engineers	.. ..	57·1	44·4
Royal Signals	.. ..	80·0	57·9
British Infantry	.. ..	43·1	43·9
Royal Tank Corps	.. ..	0·0	16·6
Average for British Service	.. ..	37·7	30·3

One would have thought that from the point of view of preparing for the examination, service at Home was definitely preferable to that in India. At Home the proportion of officers to men is much higher, there is all the advantage of climate, crammers abound, good libraries are common, and the path of the candidate is smoothed in many ways impossible out here. Still in spite of all this officers of both British and Indian Services in this country seem very successfully to have caught up or out-paced those at Home. Perhaps in India the greater realism of training, the opportunities for active service, and above all the increased responsibility that officers must accept, more than compensate for inferior external aids. For these results so satisfactory to India the major credit is due to the officers themselves, but they would be the last to grudge some of it to those senior officers and higher staffs who, recognising the handicaps to Staff College study in this country, have done so much to remove them.

* * * * *

NOTICE.

As the Institution has enjoyed a particularly successful year financially the Council has decided to assist officers suffering from the cut in pay by temporarily suspending the Entrance Fee. Officers may now become full members on payment of the annual subscription of Rs. 10 only.

Members are earnestly asked to bring these advantageous terms to the notice of non-members.

GOLD MEDAL PRIZE ESSAY COMPETITION, 1933.

The Council has chosen the following alternative subjects for the Gold Medal Prize Essay Competition for 1933 :—

(i) "With the tendency of modern Military Organization towards Mechanisation, the increasing complexity of modern weapons and the dependence of troops on their maintenance services, it is asserted by many that Regular troops are losing the degree of mobility necessary for the successful performance of their role on the North-West Frontier.

Discuss how this difficulty can be overcome so that freedom of action and tactical mobility are assured in the Army in India,

or

(ii) "Discuss the tactical employment of Light Tanks

(a) with Cavalry

(b) with Infantry

in both the plains of India and in the mountainous country of the North-West Frontier: particular reference should be made to the problems of Maintenance and Supply."

(NOTE.—For the purpose of this essay the following may be assumed :—

Organization—Light Tank Company of 3 sections each of 7 tanks ;
1 Company Commander's tank and 3 reserve tanks.
Total 25 tanks.

Crew of Vehicle—2.

Armament—One .303" Vickers gun (Special tank pattern).

Ammunition—3,000 rounds .303".

Armour—Capable of resisting ordinary .303" ammunition, .303" A. P. and shrapnel.

Speed average—Across country. 4—12 m. p. h. Road and track
20—25 m. p. h. Reduced to 15 in convoy.

Crossing power—Trench 5 feet. Water 2 feet 6 inches.

Climbing power—Slope—1 in 2½. Perpendicular obstacle—2 feet.

Circuit of Action—Road approximately 100 miles.

Petrol fill—20 gallons.

The following are the conditions of the Competition :—

- (1) The competition is open to all gazetted officers of the Civil Administration, the Royal Navy, Army, Royal Air Force and Auxiliary Forces.
- (2) Essays must be type-written and submitted in triplicate.
- (3) When reference is made to any work, the title of such work is to be quoted.

- (4) Essays are to be strictly anonymous. Each must have a motto, and, enclosed with the essay, there should be sent a sealed envelope with the motto written on the outside and the name of the competitor inside.
- (5) Essays will not be accepted unless received by the Secretary on or before the 30th June 1933.
- (6) Essays will be submitted for adjudication to three judges, chosen by the Council. The judges may recommend a money award, not exceeding Rs. 150, either in addition to or in substitution for the medal. The decision of the three judges will be submitted to the Council, who will decide whether the medal is to be awarded and whether the essay is to be published.
- (7) His Excellency the Commander-in-Chief has offered a Special Prize of Rs. 150 for the best essay submitted on subject (ii). This prize is in addition to any awarded by the Council.
- (8) The names of the successful candidates will be announced at a Council Meeting to be held in September or October 1933.
- (9) All essays submitted are to become the property of the United Service Institution of India absolutely, and authors will not be at liberty to make any use whatsoever of their essays without the sanction of the Council.
- (10) Essays should not exceed 15 pages of the size and style of the Journal, exclusive of any appendices, tables or maps.

THE DISARMAMENT CONFERENCE AT GENEVA, 1932.

BY MAJOR-GENERAL J. E. S. BRIND, C.B., C.M.G., D.S.O.

(Chief of the Indian Technical Delegation to the Conference).

THE DRAFT CONVENTION.

The following article is an attempt to summarize, very briefly, certain of the more important facts that emerged from the lengthy and somewhat tedious discussions on disarmament at Geneva during the past year, and to give some sort of explanation, possibly an unsatisfactory one to many enthusiasts who were hoping for the birth of a millenium, as to why the results were not more substantial. Many of those who were present, on the other hand, when taking into consideration the immense differences in the outlook and interests, the fears and aspirations, the local conditions and defence requirements of the sixty odd nations who were represented, will have come away from Geneva amazed that any results were achieved at all. The production of a formula or a definition that would satisfy the interpretation of all was a problem of great difficulty, and was apparent even in the case of nations ostensibly using the same language. As some cynic remarked, the Conference deserved the gratitude of the World, as, at any rate, it had got through several months without starting a new war.

In order to get some idea of the sequence of events and to understand the basis from which the discussions started, it is necessary to remember that a great deal of spade work had been undertaken by the Preparatory Commission, which had been sitting for five years before the Conference assembled and had produced a Draft Disarmament Convention.

The Draft Convention contained some sixty Articles. It aimed at limiting and, if possible, reducing the World's armaments, by fixing the numbers of effectives in the land, sea, and air forces of the various Powers; by limiting the tonnage, and in some cases the numbers by types of war vessels; the numbers and total horse-power of aircraft capable of use in war; and the total annual expenditure on land, sea, and air forces. It also provided for the limitation of the period of service in conscript armies, control of annual expenditure on land war material, and for free interchange of information between High Contracting Parties.

In accordance with the terms of this Convention, all Powers invited to the Conference (and invitations were issued to every Power, great or small, and irrespective of whether they were members of the League of Nations or not) were asked to produce, some months before the assembly of the Conference, tables showing in considerable detail their naval, military and air resources, and details of the funds expended on their armed forces for a particular year, 1929-30.

This, at first sight would appear to be a fairly simple task, as all civilized nations must, presumably, keep accurate records of the numbers of effectives, for instance, serving in their armed forces. But at once points of doubt arose. What were 'effectives,' and what were to be included in the 'armed forces?' Were territorials or militia forces which only did a part-time training to be counted and, if so, on what basis? How were reserves to be counted—some did no training at all, while others did an annual training of considerable military value? Again, taking the case of India as an example—How were our frontier levies and scouts to be counted?—Were corps like Burma Military Police or Assam Rifles forces 'organized on a military basis'? Were Frontier Constabulary and armed police to be included?

All these questions had a reaction also in the financial sphere as budgetary tables could not be produced till answers were forthcoming. Army budgetary figures were not sufficient to produce before the Conference as, again taking the case of India as an example, many of the Corps which were, or might be considered to be, 'organized on a military basis', are paid for out of Home or Foreign Department budgets or Provincial revenues. Another problem faced those who were preparing the data for the Indian Delegation, and that concerned the inclusion of Indian States Forces, both in the tables of effectives and in the budgetary statements.

Many nations have quasi-military organizations which are mainly used for police or customs purposes, and some of these are definitely organized on a military basis, and might well have military value in war. Though in most cases nations might not have the slightest intention of using these formations as they stand for aggressive purposes against their neighbours, the difficulty was to convince those neighbours of their innocence, and to discover where to draw the line. This problem has not yet been solved (December 1932) and is still being debated by the Effectives Committee at Geneva.

In due course practically all the Powers represented produced the tables asked for in accordance with the Draft Convention—though some were very late and obviously inaccurate—and these were printed and circulated with a mass of explanatory notes to the members of all delegations.

Thus when the delegations assembled at Geneva at the end of January 1932, a great deal of preparatory work had been done, not only by the members of the Preparatory Commission who had laboured for five years to produce their Draft Convention, but also by the various governments concerned in presenting the tables of effectives, details of navies and air forces, and the budgetary tables asked for under the terms of the Draft Convention. A mass of documentary information existed on which to start work.

As will be seen later, the speeches of the various delegates frequently drifted far away from the Draft Convention, and, though from time to time valiant efforts were made to bring every suggestion back into the framework already drawn up, this was no easy matter.

THE THREE PHASES OF THE CONFERENCE.

The Disarmament Conference actually opened on the 2nd of February, and its proceedings up to the dispersal for the long recess at the end of July may roughly be divided into three phases.

During the first, the Phase of Oratory, the leading delegates of all Powers paid tribute to the objects for which the Conference was assembled, and made proposals, which they considered would secure those objects, on behalf of their respective Governments.

The second phase may be termed the Technical Phase, during which the experts attached to the various delegations strove, with indifferent success, to define those weapons which were, "Most offensive, most menacing to national defence, and most dangerous to civilians."

The third phase was the period of Private Conversations during which an intense effort was made to provide some sort of formula, which would show the World the measure of the progress made.

Before describing these three phases in rather greater detail, a few words about the procedure and organization at Geneva may be of interest.

At the plenary sessions of the Disarmament Conference most Powers were represented by from three to five delegates, and until

all nations had had their initial say the greater part of the work was done in plenary session.

A General Commission was then formed at which each Power was represented by one delegate, and this in turn resolved itself into several subordinate commissions, the most important of which were the three Technical Commissions dealing with Land, Naval and Air warfare—or “*Terre*,” “*Mer*” and “*Air*,” as they were described by Monsieur Tardieu.

There were also committees dealing with budgetary questions, with effectives, with chemical and bacteriological warfare, and with moral disarmament.

Mr. Arthur Henderson was Chairman of the Conference and of the General Commission, and he was always assisted by Sir Eric Drummond, the Secretary-General of the League of Nations, and by the League Secretariat. The chairman of the other commissions and committees were mostly League habitués many of whom had taken part in the work of the Preparatory Commission.

The Conference and each commission and committee formed its own ‘bureau,’ from among whose members a few vice-presidents and ‘rapporteurs’ were chosen. These rapporteurs were mostly, like the chairmen, old habitués and were really very hard worked and very important people. A rapporteur was, in fact, a sort of super-secretary, and not only did he have to draw up the final report of his committee, but he was constantly busy trying to evolve resolutions which would bring into harmony the very conflicting views of the various nations.

Two languages, French and English, were officially employed, and, with very few exceptions who spoke in German, all speakers used one or the other of these languages. All speeches made in French were immediately translated into English and *vice versa*. The translators were provided by the League Secretariat and some of them were wonderfully expert and fluent. Practically all the clerical work was performed by the League Secretariat.

THE FIRST PHASE—ORATORY.

To the average onlooker the opening phase, the first few weeks of the Conference, was undoubtedly the most interesting—the speakers were in many cases men with world-wide reputations, men whose names were household words throughout Europe. They came as

plenipotentiaries from the various Powers ready to announce to the World how far the Governments who sent them were prepared to go in the cause of disarmament, and the World was agog to know what each of them proposed. Intense propaganda had been carried out by League enthusiasts, and many less well-informed organizations were demanding results far in advance of those that were hoped for by members of the League—results outside the realm of possible achievement.

The proceedings opened with a somewhat uninspiring address by the President of the Conference, Mr. Arthur Henderson, and this was followed by two or three dull days devoted to routine matters. The opening week was not allowed to close without one dramatic incident. Just before the proceedings for the day terminated, M. Tardieu, who was at that time the French Minister of Defence and Leader of their delegation, marched solemnly up to the rostrum and presented the French proposals to the President. These proposals curiously enough have never to this day been formally discussed at the Conference, though the French representatives have on several occasions insisted that they must be treated as one indivisible whole, and they now (December 1932) seem to have been supplanted by a new set of proposals.

It would be impossible in an article of the length of this, to attempt to deal with even a portion of the speeches made, but it is possible and may be of interest, to describe the attitudes of the more important Powers, as they appeared from the speeches of their representatives.

United Kingdom.

To Sir John Simon, British Foreign Minister, was assigned the honour of first place on the roll of speakers. If anybody was expecting profound suggestions and far-reaching proposals from the United Kingdom Delegation they were doomed to disappointment. The reason for this is perhaps obvious—for years past Great Britain and indeed all members of the British Commonwealth had, under the stern pressure of financial necessity, been reducing their armaments—but this reduction had been unilateral and it was evident to all that it could no longer continue on that basis. Moreover, the British Empire, in common with its co-signatories of the Washington and London Treaties, had shown the World that the mutual limitation of armaments—in that case naval—could be agreed to between Powers, and that a limit could

be put to the strength of fortifications in a defined area. In other words competition in armaments between Powers could in certain conditions be kept within bounds. Briefly, the British policy appeared to be that the United Kingdom had already gone a very long way in the cause of disarmament, and had done so during a period when other European nations had been piling up their armaments, that she could go no further alone, but that she was prepared to do so in co-operation with others. The concrete points in the British proposals were the abolition of gas and chemical warfare, the abolition of submarines, the limitation of effectives (as abolition of conscription was such a very thorny subject), and in addition the prohibition of such armaments as would weaken attack. The United Kingdom was also prepared to co-operate in reducing the size of warships and the maximum calibre of naval guns, and would agree to a limitation in the size of land guns.

France.

The attitude of France was really the deciding factor at Geneva. France, as the strongest land and air power in Europe, held all the high cards, and unless she could be induced to reduce her armaments it was idle to expect that substantial results could be achieved.

In order to understand France's attitude, it is essential to consider her point of view. Her policy is dictated entirely by fear—and fear makes her demand security. For fifty years prior to the Great War she had been bullied and threatened by Germany—she was twice invaded, and the horrors of the second invasion were still vivid in the memory of many of her citizens. After the War her one idea was to ensure her security during, at any rate, the next generation or so. With this object in view she has done everything in her power to prevent the military regeneration of Germany—even to keep her in subjection. German man-power, combined perhaps with national efficiency and organizing ability, is the bogey, and though France with her immense superiority in armaments has nothing to fear at present, even if short of men, she feels that, with every reduction in her armaments, up goes the corresponding value of German man-power—even if it is untrained. It was this craving for security that underlay the French proposals, the basis of which was an international force at the disposal of the League, and the control by the League of all those weapons which are essential for attack, such as heavy and long range artillery, tanks and big bombing aircraft. How they visualised such a force would be accommodated, commanded, trained

or provided with munitions was never explained, for, as mentioned above, the French proposals have up till now not been discussed.

The most striking members of the French delegation were Mm. Tardieu and Paul Boncour. The former was Minister of Defence at the commencement of the Conference but after the Cabinet crisis early in the year he returned as Prime Minister, and still led the delegation till his Government fell and was replaced by that of M. Herriot. M. Paul Boncour is a wonderful orator and in appearance and fluency not unlike Mr. Lloyd George. He is an old League celebrity and has been connected with the disarmament problem for years. He was at this time also President of the Council of the League.

Germany.

The German delegation, who were originally led by Dr. Brüning and subsequently by Herr Nafelitz, adopted one single line—they would consider no measure of disarmament that did not reduce the weapons and effectives of other Powers to a level corresponding to that imposed on them by the Treaty of Versailles. In this policy they were systematically supported by the other defeated Powers—Austria, Hungary and Bulgaria. There is no doubt that this stubborn attitude delayed progress immensely and, if anything, it alienated sympathy. To the observer it appeared that if they had announced the policy of equality as their ultimate goal, and if they had been prepared to reach that goal by stages, many of the discussions would have resulted more nearly in unanimity. As it was there was always an extremist block who were as far apart from the moderate majority in one direction as France was in the other. Time alone will show whether this German policy will pay in the end. General opinion at Geneva seemed to be that questions involving the revision of treaties concerned only those Powers who were signatories, and that the subject was outside the purview of the Disarmament Conference.

This attitude of Germany, however, is just as intelligible as that of France. She naturally feels her present position, and objects to being kept in perpetual subjection. The smaller defeated Powers perhaps feel their position even more keenly, as they are surrounded by other small Powers, all very heavily armed, some of whom had no existence as nations prior to the post-war re-arrangement of the map of Europe. The political situation in Germany and in particular the growth in political power of the Nazis, was unlikely to encourage a sympathetic attitude in France.

Italy.

The line taken by Italy was interesting. She took upon herself the rôle of 'Father and Mother' of the defeated Powers. She supported them in every detail and, like them, advocated universal disarmament down to the level prescribed for the vanquished Powers in the Peace Treaties. This seemed to be a curious attitude for her to adopt and it is interesting to speculate on the possible causes. In 1914 Italy was bound by the Triple Alliance to Germany and Austria, only in the event of attack on either of those Powers, and she apparently was in no doubt that the Central Powers were the aggressors. Consequently she held aloof for a time, but before long threw in her lot with the Entente. The Peace Treaties practically obliterated her greatest hereditary enemy, Austria, and now she has turned her attention to the north-west and looks on France as the only possible power who can threaten her peaceful development. Moreover, like other nations before her, Italy is probably interested in the maintenance of the balance of power in Europe, and it does not suit her to see Germany, who from her geographical position cannot cause Italy any alarm, in a position of permanent inferiority. Be that as it may, Italy throughout the Disarmament Conference has shown a marked tendency to support the claims of the ex-enemy Powers, and an equally marked disinclination to agree with any proposal put forward by France's representatives.

Italy also had the advantage of having in her leading spokesman, a very remarkable personality, Signor Grandi, then Foreign Minister, is a man of striking and to many people, attractive personality. His keen eyes and close-cut beard gave him a rather Mephistophelian appearance; he was very young for his position, rumour said in the thirties; he always spoke in French which was very clear and intelligible to non-French-speaking listeners; his speeches were short and to the point; in fact with the general public he was probably one of the most popular personalities at the Conference. He had one great advantage over many of the representatives of the other Powers in that apparently he had only one man, instead of a cabinet, to refer to, and that one knew his own mind.

The Italian proposals were quite brief—the abolition of capital, ships and submarines (it is noticeable that they linked the two together) of aircraft carriers, heavy artillery, tanks, bombing aircraft, and of chemical and bacteriological warfare, and the revision of the laws of war for the protection of civilians.

Russia.

The first representative of the Union of Soviet Socialist Republics was Litvinoff. He always spoke English—he was married to an Irish wife—he was very fluent and never at a loss for a word, but not very easy to understand. The policy advocated by him was one of total disarmament, absolute and complete. No one seriously believed that the U. S. S. R. delegation was sincere in its proposal. However, Litvinoff insisted on having it put to the vote, but he received no support whatever. In discussing Russia's proposal for total disarmament, Signor Madariaga, the leading Spanish delegate, told the General Commission a little fable, the authorship of which he imputed to a British politician. The animals, he said, came to the conclusion that the world would be a happier place if they all gave up certain of their offensive attributes. So the lion agreed to sacrifice his teeth, the tiger his claws, the eagle his beak and so on, and then they approached the bear and told him about their proposals. The bear listened attentively and said, "This is a splendid idea! You give up all those unpleasant attributes of yours and then I will come and embrace you all."

Without abandoning their policy of total disarmament, the Russian delegation stated that they were prepared to approach their goal by stages, and that they would therefore support every partial measure which they considered led in the direction of their objective. In general, they espoused the cause of the ex-enemy Powers. In addition they put before the Conference very comprehensive proposals for the reduction of existing armaments. These proposals received no support worth speaking of, because they were based simply on arithmetical calculation, and in no way adhered to the principles of Article 8 of the Covenant of the League of Nations.*

The Smaller European States.

The policy of the smaller European States may be described as one of moderate reduction of armaments. They would have liked the abolition or restriction of all those types of armament which they themselves were unable to afford. Most of them were in favour of some form of conscription, even, for example, Switzerland, who though she trains her conscripts for a minimum period, considers it is the duty of every citizen to serve. France's eastern 'allies' though

* Article 8 states that the maintenance of peace requires the reduction of national armaments to the lowest point *consistent with national safety* and visualises the *geographical situation and circumstances* of each State being taken into account.

prepared to support France up to a certain point, seemed to be distinctly sensitive to the attitude of their Eastern neighbour, and were not antagonistic to proposals which might limit her offensive power.

United States of America.

Although not a member of the League of Nations, and not to any great extent directly concerned in the reduction of armaments, the U.S.A. was undoubtedly anxious for some results from the Conference. She was not sympathetic towards those Powers who maintained they were unable to pay their debts and yet were able to spend large sums of money in piling up their armaments, and, like several others, her delegation was inclined to grow impatient at the lack of definite results from all the discussion. Her attitude was one of approval towards proposals for reduction of those types of armaments which she did not require herself, but she was opposed, except on her own terms, to suggestions directed against armaments in which she was interested.

Japan.

Japan was throughout the discussions perhaps the most silent of the Great Powers, though her delegation was quite the most numerous. It is only fair to say that a large number of her representatives were concerned primarily with the discussion on the Sino-Japanese conflict rather than with disarmament. Japan, like some of her European colleagues, suffers from the proximity of two large neighbours in whose vast man-power she sees a constant potential danger. Although she has waged successful wars against both in recent years, she has no intention of allowing herself to drop to a position of inferiority if she can possibly avoid it. In general, therefore, her delegation sat silent, watched the attitude adopted by other Powers, and supported those who conceded least.

China.

The policy of the Chinese representatives was one of complete support of the defeated Powers. They wanted reduction of armaments to the lowest possible limits, an attitude that was, in fact, adopted by most of the States having the greatest resources in man-power. The minds of the members of the Chinese delegation were concentrated mainly on what was happening in China and Manchuria, and though they were comparatively silent at the various disarmament meetings, they lost no opportunity of propagandising their case and their point

of view in the Sino-Japanese dispute. The Chief Chinese delegate was Dr. Yen, an extremely able man, who spoke invariably in English, and as good English as any one else at the Conference.

The latter weeks of the first phase of the Conference were occupied by the Bureau in framing a survey of the various proposals put forward, in co-ordinating these with the terms of the Draft Convention, and in dividing up the work between the various commissions. This task was very ably carried out by M. Benes, the rapporteur, and it was one of great magnitude and no little difficulty, as delegations were constantly getting new ideas and frequently felt they would like to associate themselves with proposals made by some other delegation. The first tasks of the Technical Commissions were based on four resolutions which were passed by the General Commission towards the end of April.

These resolutions reaffirmed the desirability of the reduction and limitation of armaments in accordance with the varying geographical and other requirements of the States concerned; they adopted the principle of qualitative disarmament, and expressed the opinion that "the range of land, sea and air armaments should be examined by the competent special commissions with a view to selecting those weapons whose character was most specifically offensive, or most efficacious against national defence, or most threatening to civilians."

THE SECOND PHASE—TECHNICAL COMMISSIONS.

These Commissions started work in April and met morning and afternoon whenever accommodation could be found for them—there was usually room for three Commissions, at least, to work simultaneously.

The Land Commission.

The Land Commission was presided over by M. Buero who was one of the delegation from Uruguay. He had evidently been in Geneva some years and knew all about the procedure. The only land armaments to which objection has been raised, on the grounds that they were particularly offensive and menacing to national defence or particularly threatening to civilians, were heavy guns, tanks and armoured cars. An attempt was made by the German delegation to include frontier fortifications within this category, but although it was discussed nobody really paid serious attention to it, as the claim was obviously only directed against the modern French frontier fortifications. The discussion on guns went on for some days and views varied immensely.

The opinion of most delegations was that guns and howitzers of calibre of over 6 inches could be classified as particularly menacing to national defence, because, in view of the strength of modern defence with machine guns, a Power would scarcely be able to undertake an offensive with anything less. For reasons entirely connected with the Versailles Treaty, Germany and other ex-enemy Powers tried to bring the level down to 105 mm. (about 4.2 inches) and in this they were supported by the Italians and U. S. S. R. France on the other hand only came down to an 8 inches limit when she felt it was likely that she would be left in a position of isolation, as even her Eastern allies were inclined to consider that all guns over that calibre were particularly offensive.

As regards range, the main discussions revolved round the problem of the size of a modern battlefield, for it was felt that in the neighbourhood of the actual front line, where the majority of personnel and organizations are mainly military, there could be no justification for limiting a weapon because it might hit a civilian with a chance shot. On the other hand behind this zone there existed obviously an area where military organizations would naturally be very few in number and scattered, and where the preponderance of personnel would be civilians. The general opinion was that the range of guns should be limited in such a way that protection should be afforded to civilians living behind the battle zone.

Here again, while the majority of nations considered that a limit of 20 kilometres from the front line was ample, the ex-enemy powers tried to reduce it to 15 kilometres. The French, on the other hand, while preferring a vague wording, wished the zone increased to 50 kilometres on either side of the line, in order to include areas in which reserve formations might be billeted, and from which they could be brought up by motor transport.

The discussions on tanks and armoured cars disclosed wide differences of opinion. There was some unanimity about armoured cars, as, except for the group of States which consistently supported the Germans and their late allies, the majority were of the opinion that armoured cars did not come within the category of armaments which would be described as most efficacious against national defence or most dangerous to civilians.

The views on tanks are not so simple to describe. A large number of delegations expressed the opinion that tanks of every description

should come within the definition laid down by the General Commission. With the exception of France, all the remaining delegations who expressed their opinions considered that heavy tanks, *i.e.*, those weighing over about 25 tons, should come under that definition. France's delegation expressed the view that armoured fighting vehicles of less than 70 tons could not be described as offensive rather than defensive in purpose, and that armoured vehicles should be considered as among the weapons *least* menacing to civilian populations. This plea of France's seems on the face of it to be very far-fetched, but throughout the discussions, when claiming that certain weapons were necessary for defence, it was clear that counter-offence was what was in her mind.

A small number of other States supported the British view that medium tanks, defined as "between about 20 tons and about 10 tons" should not be regarded as objectionable, and a larger number wished to exclude light tanks (those below 10 tons in weight) from the ban.

The Naval Commission.

The Naval Commission at once found itself in difficulties in attempting to definite different types of war vessels as the most offensive, most efficacious against National Defence and most threatening to civilians. It was obvious after the first few discussions that there was no likelihood of unanimity being reached because the outlook of the various Powers and the objects for which their fleets were maintained, were so divergent. The report submitted by the Commission was, therefore, no more than a record of the views expressed by the different nations concerned.

The three types of war vessel around which discussion centred were capital ships, aircraft carriers and submarines. The great Naval Powers, with world-wide responsibilities or great lengths of coast-line to protect, maintained that their battle fleets were the essential backbone of their country's defence, and that they were not threatening to civilians. Another group of Powers declared that they were only offensive when possessed by a State adopting a policy of aggression, while a number of delegations, chiefly those of non-naval States, while admitting that capital ships could contribute efficaciously towards National Defence, insisted that in virtue of their greater tonnage and higher gun-calibre they were most unpleasant in all three respects.

The problem of aircraft carriers led to just as much variety of opinion and confusion of thought. The great naval Powers (except

Japan) considered that if bombing from the air were abolished, aircraft carriers in themselves would have no offensive value at all. The majority of Powers, however, considered that as at the present time bombing aircraft could be carried on these vessels, and as the carriers formed mobile bases for the bombers, they were specifically offensive, efficacious against national defence and threatening to civilians. This view was in fact supported by the Air Commission who, when dealing with the same problem, came to the conclusion that the offensive capacity of aircraft must be considered as being increased by the mobility of the vessels which carry them.

The question of the submarine seemed to cause even more diversity of opinion, and there were definitely two distinct problems connected with it—first, the use of submarines against merchant vessels and therefore against civilians and, second, the purely legitimate use of submarines as ships of war, assuming that they conform to the laws of war as surface vessels do. As to the first there was practically unanimity of opinion that, on the understanding that they adhered to the rules laid down in the Treaty of London, submarines could not be considered as threatening to civilians. The British Empire delegations and the U. S. A. were of the opinion that they were offensive and efficacious against national defence, while all the smaller naval Powers and in this case France and Japan are included, were of the opinion that submarines were indispensable for defence. Italy adhered to her original theory and linked capital ships and submarines together. Her contention was that if capital ships were retained submarines were essential for defence; if, on the other hand, capital ships were abolished, submarines would assume an offensive character.

The Air Commission.

The problem facing the Air Commission was even more confusing, as each State naturally looked upon the offensive character of its own air armaments from exactly the opposite point of view from its neighbour. While the underlying principle that something must be done to protect civil populations from the horrors of air bombardment had been accepted by all in the General Commission, opinions varied greatly in the Technical Commission as to how this principle should be put into practice.

Certain States wished to prohibit bombers, others to prohibit the act of bombing (and naturally the construction of appliances and

training of personnel); a third group to abolish naval and military aviation altogether. Against these proposals were advanced the arguments that it was impossible to differentiate between bombers and other types of aircraft, all were potential bombers; that no matter how the wings of military aviation were clipped, there would still be the problem of civil aviation to deal with. It was accepted by all that civil aviation was bound to expand and that, unless steps were taken to control them, civil aircraft could rapidly be converted into bombers. So strongly was this opinion held by some of the leading air-powers, that it came to be regarded almost as a *sine qua non* that some effective form of control would be necessary as a corollary to whatever steps might be taken to reduce and limit naval and military aircraft.

Other proposals were discussed, one of which was to limit the area in which bombing would be permissible to a battle-zone in the same way that a limit was proposed in the land commission for long-range guns. In the case of guns, however, the limit would be imposed on gun construction, whereas for aircraft, the limit could only be imposed by rule. Another proposal which received wide support was to limit the size of military and naval aircraft, though this raised heated discussions among the experts as to how that size should be measured. Some delegations maintained that unladen weight was a sufficient basis, while others insisted that other factors such as horse power were essential. If this latter proposal, limitation of the size of military and naval aircraft, that is a qualitative limitation, were accepted, it was considered, on the assumption that a number of small aircraft could do as much damage to civilians as one big one, that a quantitative limitation would be necessary as well.

The unfortunate rapporteur of this Commission had a most difficult task. His report gives a mass of detail for which not he, but the delegations who insisted on having their views recorded, are responsible. It is obvious from reading it that no solution can be expected from Commissions composed as this was, and it was no doubt due to this fact that the third phase of the Conference was confined to an effort on the part of the leading delegates of the most influential powers to find in private conversations some broad basis of agreement on a few points at least.

Special Committee on Chemical and Bacteriological Weapons.

As this subject was common to warfare on land, on sea and in the air, and did not belong specifically to any one of them, a special

Committee was formed to study the problem in connection with the resolutions adopted by the General Commission. Unlike the other Technical Commissions this Committee did come to definite and satisfactory conclusions. This may be due to the fact that these types of warfare had for long been universally condemned, and that no State had really anything to sacrifice—no organization to give up. The report of this Committee dealt not only with the chemical and bacteriological means of warfare but also with incendiary projectiles and it condemned the lot. At the same time, it made it quite clear that neither the normal gasses arising from combustion and detonation of explosives, nor smoke were included in the definition of chemical means of warfare.

THE THIRD PHASE—PRIVATE CONVERSATIONS.

This phase, as has been said above, consisted in an effort on the part of the delegates of two or three of the States most interested in the problem of disarmament to get together and draw up a resolution, to which all States represented could subscribe, showing the degree of agreement that had been reached after many weeks of apparently fruitless discussion. The Powers concerned in the first instance were the United Kingdom, the U. S. A. and France and later on other Great Powers were included. The discussions were all carried out in private, and the results are contained in the somewhat nebulous resolution that was adopted almost unanimously at the end of July.

This period, however, was not so uneventful as it might appear, as, on the 22nd June, Geneva was awakened from the lethargy which had descended on it while the private conversations were continuing, by the declaration by Mr. Gibson of the U. S. A. delegation of what are known as the Hoover proposals. This declaration was mainly a political manoeuvre made in connection with the forthcoming presidential election. The announcement was made at Geneva at exactly the same moment as Mr. Hoover was making the same statement in America.

The Hoover proposals contained much that had already been in the American programme. In certain points they were perhaps a little more precise, in that, for instance, they definitely advocated the abolition of all tanks, of all bombing planes and the prohibition of all bombardment from the air. There was one quite new point dealing with effectives. Land effectives were to be divided into two parts—a 'police component' and a 'defence component.' The police com-

ponent was to be calculated on a basis of population, the percentage allowed being that permitted to the defeated powers in the various peace treaties. All troops over and above the police component were to be considered as the defence component, *i.e.*, the strength required for defence against foreign attack. After analysis of the forces of all States on this basis, Mr. Hoover proposed there should be a reduction of one-third in the strength of the defence components of all Powers possessing them. The effect of this if agreed to would be a considerable reduction in the strength of the armies of countries such as Russia, Italy and France, and some of the smaller Eastern European nations, but negligible in the case of members of the British Commonwealth of Nations, the U. S. A. and, of course, in the case of the ex-enemy Powers. The proposal, while received with caution at first, has now received the blessing in principle of several States.

What, it may well be asked, has been achieved as the result of all these months of discussion, of all this expenditure of time, and at no little financial cost? Very little so far, it must be admitted. Progress has been terribly slow, but it should be remembered that a Conference such as this is very sensitive to political and other influences from all over the world. Delays were caused by a French cabinet crisis, by general elections both in France and Germany, more than once by the Sino-Japanese conflict, by the financial discussions at Lausanne, and finally the Conference adjourned for months because it was felt that it would be useless to continue until after the American presidential election. One fact emerges, and that is that all States have now been compelled to put their cards on the table—some of them perhaps did not know a year ago what their policy was with regard to disarmament. Now most of them have been compelled to state it.

And what hope is there for the future? The world is demanding reduction of armaments for financial, if for no more altruistic motives. The Washington and London naval treaties have shown that, given goodwill, competition in armaments can be controlled. There may well be further reductions in the tonnage of warships which will apply to other Powers than those who are parties to the present treaties. It should be possible to reach agreement for some qualitative reduction in land armaments and the Hoover proposals may form the basis for quantitative reduction of the effectives of those powers who maintain the largest standing armies. The feeling in Europe against air bombardment is intense, and there is no doubt that many States, particularly

those who are surrounded by potential enemies, will leave no stone unturned till some degree of reduction and limitation of air forces is agreed to, and this will necessitate some measure of control of civil aviation. These results may not be much, but they should afford some financial relief, and might well render less likely, or postpone the likelihood of, another European conflagration. Whatever is achieved can only come gradually, and this is clear to many of the keenest disarmament enthusiasts. Only a few months ago when the lack of definite results was making both press and public impatient, Lord Cecil pointed out in an article in a Swiss periodical, that progress must be gradual, and that no one must believe that even complete Disarmament would mean the abolition of War. Human nature would still be the same, and men would still fight with sticks and stones. All that could be expected would be that the probability of War would be rendered more remote.

BRIDGE AND BATTLES.

BY LT.-COL. S. R. WASON, M.C., R.A.

I suppose there is no doubt that there has never been a card game half so popular or so widely played as bridge in its various forms. War is a "game" happily not now by any means as widely played as it once was but certainly more widely studied in its theoretical aspects. Apart from the enormous numbers of officers of different armies, who have to do so willy-nilly, there is an unaccountably large number of civilians who get a kind of spurious interest out of it.

Napoleon said that chess-playing was good training for the art of war, though one of his contemporary biographers, De Bourrienne I think, said he played it very badly which seems to shake the theory. Chess, however, is not a game of chance and, after all there is a lot of luck in both the games we are talking about. Sometimes a false card may divert an opponent from the object really within his grasp; in a similar way the Turk counterattack on the night of 16th/17th April 1916, which was their very last bolt, effectually prevented any further attempts to relieve Kut. But to return to Napoleon; he also liked whist though "he preferred *vingt-et-un* because more people could join in the game." It is said he used to cheat at the game which perhaps only shows he knew what company he kept; anyhow we are not told that the others did not do so too. Talleyrand was a great whist addict, in fact he said of someone who did not play, "What a dreary old age he is preparing for himself!"

There are many apposite analogies to be made between the phases, ruses, decisions and humanities of the bridge player and of the soldier. Each can learn much from the other. We all know the fussy card player and some of us have heard of the fussy commander who, having made plans, issued orders and so on, still would not leave things alone. We had, however, one very senior commander who in similar circumstances used to say "now we must leave it to Thomas Atkins"; and that ended it. The Generalissimo of another nation may perhaps have carried this too far, but it gave his people the confidence they needed. Anyhow there is no doubt which temperament makes the better card player.

So many comparisons can be drawn that it is hard to know where to begin, and it is probably better not to begin at all. After all "Bridge" means so many different things to different people; from the after-dinner family game as a fine preparation for a good night's sleep to bridge as a life's business, either as a means of making money out of one's friends, or by writing books or newspaper articles, or even as an aspirant to international honours. Then it can be played under many different rules—is not war the same?—from the friendly game as played with elderly relatives, who perhaps have good shooting, where it is positively a disgraceful act to call a card or even draw attention to a revoke, to that brand of game indicated by the player who, on sitting down to the table asked, "Now, boys, is it cricket or all we know?" In the pre-auction game the redouble of a no-trumper was always the affair of the evening. To do so it was supposed to be necessary to have all suits guarded—the doubler as a rule having one good suit and perhaps cards of re-entry. But there were once some Jews playing together; one redoubled on a fine hand but with a singleton king in one suit; whereupon his opponent led out the ace of his long suit, looking over his spectacles and saying, "And, Ikey, if my eyethight doethn't detheive me, you have the king thingle!"

To many the most interesting feature of the battles of the past is the personality of the actors. The "transcendent ability" of Marlborough and the "inevitability of Cæsar's ablative absolutes." So in cards is the personal factor the dominant feature of the game at its best; incidentally its study is the most remunerative. How often have our pockets suffered from the elusive witchcraft of the so-called "psychic" player, who continually gets away with declarations that either rob the adversary of their due spoils, or snatch seemingly impossible victory. There can be few better cases than that of Lord Peterborough in Spain in 1704-1705. Having done the Spanish out of Barcelona he used his guile on Las Torres into withdrawing his force which was in a superiority of over five to one. He then caused the garrison of Nules to surrender to a very inferior force and captured large quantities of stores he badly needed. Next he played the same game on Las Arcos, who, having a superiority of at least three to one, retired and abandoned Valencia. At no time had Peterborough a well-equipped army and he was always in greatly inferior numbers. But psychic play is not really witchcraft. It is the result of knowledge based on study and of sub-conscious calculation. It has relations to time and

space problems and is never (in really good players) purely a matter of chance. We mostly read some military history: how few of us read books on Bridge!

The basis of correct declarations and correct play of the cards is a series of normal systems akin to the tactical and administrative practice and training of an army. Just as there has been a great all-round advance in the training of armies so there has been a great all-round advance in the technique of card playing. There can be no better illustration of this than the fate of the famous Whitfield "six-carder." This is a double dummy problem which bears reproduction. Spades are Trumps.

S. Kn. 9.

H. Kn. 4.

D.—

C. Ace. 4.

S.—

H. Qn. 9.

D. Qn. 6.

C. 10·5.

S.—

H. 10·5·3.

D. Kn. 7.

C. 3.

S.—

H. Ace. Kg. 6.

D. 10·9.

C. 6.

South to play and make all six tricks. The following is, I believe, its history. It was produced over forty years ago as a whist problem, published in a well-read journal in America, and no solutions were received. In the beginning of the bridge boom, say about 1898, it was reprinted and a few correct solutions were forthcoming. It was published again some years later and so many correct answers were received that the envelopes were never opened.

These tactical and administrative layouts are based on a theory of which the principles of war (how many of us have struggled to remember some crammer's aide-memoire) are the foundation. They have their counterpart in bridge to which every one of these sage rules is applicable. How often are they broken! The principle of maintenance of the objective (late-lamented in that its demise destroyed the aide-memoires), how often broken by the greedy who hanker after large scores above the line, or the timid, who play safe—like Sir Harry Burrard and Sir Hew Dalrymple in turn after Vimeiro.

This matter of a theory is an interesting thing ; is it not at the back of everything however faintly realised ? Some laugh. One young man is supposed to have laughed at Carlyle, who answered that there were others who once thought that practice was enough and that an ounce of practice was worth a ton of theory, and they too laughed ; “ and there arose a man who wrote a book called “ *The Social Contract*,” and the skins of the scoffers went to bind the second edition.” For there was a rumour that the revolutionaries, short of leather, tanned the skins of the victims of the guillotine. This was the precursor of the story of the “ *Kadaverfervertungsanstalt*.” It is an expensive business both in cards and in war to have to learn entirely by one’s mistakes like the hero of “ *Duffer’s Drift*.” In war few commanders—Frederick the Great was an exception—have made a success of it. But the bridge-player who loses repeatedly is often slow to realise that he is “ practising his mistakes.” Luckily he is losing his own money and not his country’s men.

Every principle of war as has been said before is a principle of bridge. Take the principle of security ; what better example than the honesty we all demand of our partners’ initial calls ? Take the principle of offensive action, well illustrated in the simplest bridge attack—take out trumps and make a suit good before the other side can do so ; draw his reserves and then overwhelm him. The combination of offensive action with a degree of security is the rationale of the initial call in bridge as played to-day. A simple plan is probably as important in bridge as on the field of battle ; always providing that in the game as in the fight the player has the wit to piece together and turn to account any scraps of information that come his way.

How often have the disagreements of allies, veiled or otherwise, ruined a campaign ! The advance on Sebastopol was undertaken because our relations with the French, though not by any means bad, would not have stood the truth being told—that neither army was fit to undertake any operation at all. Not less often has the selfishness and shortsightedness of partners hurled games and rubbers into the abyss. Again the mutual trust of allies—Foch and Haig in 1918—has brought comparatively no greater gains in their way than come to two practised players versed in the indications and inferences of call and play, who seem to be able to read through the backs of each other’s cards. Even Marlborough could not win with the Dutch deputies as partners, but with Eugene he rarely lost a game. A feeling of mutual

confidence is the first necessity for successful play; we have all struggled only too often with the erratic caller who blows hot one moment and cold the next.

Bridge in messes is quite a valuable game as long as points are low enough not to matter seriously, and as long as there is no feeling of obligation on anyone to make up games when he may not wish to do so. I do think, however, that everyone wishing to play should be encouraged to cut in as in a club; it is a rule of the game. Guest night bridge is sometimes an extra good game.

Bridge has well-known gambits just like warfare; well-known but oft successful none the less. Ole Luk Oie's third degree is a shaft in the quiver of every experienced player. There was once a habit of calling two no-trumps on a three suit hand as a sort of semi-pre-emptive call. It was always a bad declaration. The only time two no-trumps is now supposed to be called in respectable auction bridge is on a strong hand with all four suits guarded. Now the opponent on your right with a good suit may want it led in no-trumps. I have seen this gambit well played in fairly good class bridge, *i.e.*, first call two no-trumps on a three suit hand and cause the opposition to think this is your habit. Next time call it on a four suit hand and the opponent on your right calls three of his long suit and walks into a nice remunerative double.

Envelopment, counterattack, the valley-penetration, the masked position, the feigned withdrawal (diverse examples are Senlac and Tannenberg) have their standard counterparts in the play of the tenace. Is theory dead? Quite a large number of *soi-disant* bridge-players do not know the meaning of this term—the forced discard, the Bath coup, the Deschappelles coup, the Vienna coup, the Grand coup.

The current practice of employment of all arms in co-operation combined with the normal systems of supply and administration are the groundwork of an army's normal employment. But that never stops the efficient commander from using whatever he has at his hand in an emergency—our dismounted cavalry saved situation after situation in the autumn of 1914—or improvising systems of supply and transport when the need arises. The play of the hand at bridge rests on a network of normal systems of bids, raises, overbids and doubles, and legitimate finesses and legitimate expectations of division of the cards. But that never prevents an experienced player giving a possible but unlikely division or placing of the cards a try when under those

circumstances, and those circumstances only, can the game be won or saved. On the other hand if the game can be won by playing safe, only the beginner risks solid gains for problematical tricks or slams. The effective player—and I suppose it will be agreed that generally speaking the better anyone plays a game the more pleasure he gets out of it—must have all powers at his command, bold yet reasoned declaration, an instinctive knowledge of the possibilities of every hand in play, and a ready command of all the ruses, such as false-carding, misleading discards, unblocking suits, placing the lead in one or other of the opponents hands to induce them to commit a blunder or to force a favourable lead (*vide* the Scots at Dunbar); even the bold lead of a weak suit to induce the opponents to shun it. Behind these he must have a powerful grasp of the potentialities and weaknesses of the position. Even so did Hannibal in his great battles at the Trasimene, the Trebbia, the Ticino and Cannae prevail against usually stronger opponents by making use of his knowledge of the Roman commanders' weaknesses, of ruses, ambushes and well-timed combination of all the forces at his disposal.

Bridge demands in a high degree the faculty of plan-making on rather scanty information. The declarations of auction and even more so of contract are very like the opening moves of a campaign sometimes pursued by two partners with rather divergent views, a situation not unknown among allies or even the commanders of different parts of the same army (Soult and Ney in 1809). Many have crossed the Rubicon in haste, to regret it later.

Bridge again gives several good examples an evening of the necessity for change of plan. Recall Wellington's remark about the French marshals in Spain. "They made their plans like a beautiful new set of harness but what happens if anything breaks? I make mine of rope; if anything breaks I tie a knot and go on." One must be ready too to relapse into a timely defensive when attack has failed and for the still more difficult military operation of grasping the opportunity of changing defence into attack. What coups the Masters of the past have brought off by bold conception—*vide* Tel-el-Kebir and the Peiwar Kotal. In the same way many are the fat scores above the line and at the end of rubber which we have all seen grasped or thrown away by appreciation,—or the lack of it—of the changes and chances of this very varied game.

It presents striking illustrations of the value of the initiative. Two strictly average hands played boldly together on the declaration they have made, will almost always make one trick, often two and sometimes three; here is the campaign of Jena over again. The advantage conferred by interior lines is also very similar to that of the declarer and his dummy. After the late war no one need be at a loss for instances of the help a central position gives.

Bridge has its Pyrrhic victories and its Fabian tactics; one may have to "flag-fly" and so pay too much for success and one may have to sit tight for most of an evening. It has its guerilla tactics. It has its "offensive," or as we should perhaps now say, its active defence. Like Jackson's dashes up and down the valleys of Virginia and Napoleon's movements on the Marne in 1814, the weaker hands can often keep the stronger at bay, and, oftener than in war, can prevail in the end. But there is the final point that, in contract especially, in order to win games high declarations must be risked. Germany made two such in the late war, in August 1914 and in the spring of 1918; she failed narrowly to make her contract in each case and lost the rubber in consequence.

It would be possible to go on drawing similes for pages until all the familiar tags of military history—and with them everyone's patience—were exhausted. So as laid down for "military writing" a conclusion must be stated.

On the whole I think one may say that bridge is a useful game. One learns to know one's friends rather well at this game. It has more pleasures than admitted by the cynic who said it was "a good way of enjoying one's friends society without having to listen to their boring conversation." It can do a little towards quickening the wits—so long as it does not become an obsession. The bridge-player is useful in the mess unless he begins to look on the game as a means of reducing his mess bill. One has even seen the bridge table become quite a useful school of repartee though that is hardly its avowed purpose. But on the whole I'm afraid one could not recommend it as a preparation for the Staff College examination, nor do I see "A Mother of Ten" recommending it as a way to get on in the army. Perhaps it is too fascinating a game.

THE WORLD SITUATION TO-DAY.

BY CAPTAIN A. G. FULLER, M.P.

The Essence of the Matter.

It has been said that war is the supreme enemy of mankind. This may not be a very popular statement to present to readers of a Service Journal, but we may rest assured that the implications do not single out the soldier as an evil, or even an enemy to progress. Neither is he to be regarded as the sole representative of a barbarism which is as much in evidence to-day as it has been throughout recorded history. For he occupies a position not one whit inferior to his civilian brother, and the top hat and tail coat is as much a cover for barbarism, as was the less comely, but equally effective and infinitely more practical, skin covering of our earliest ancestors.

War is both the finale of reasoned national policy, and the precursor of untold misery and distress to those who partake of it, and to many others besides. The pursuit of such a policy is a certain indication of intellectual anæmia, and the World appears to be suffering from a severe attack of this malady to-day.

Consider the following :

1. There are in the World to-day at least 20,000,000 unemployed, chiefly, be it noted, in the great industrial countries, and especially among those who were more directly concerned in the Great War.

2. The means of exchange, so essential to economic progress, and vital to existence, are chaotic. A gold standard persists here ; sterling prevails there ; barter elsewhere, and all this is reflected in the decline of trade throughout the world. This decline is so severe that 50 per cent. is a conservative estimate. Tariffs, import restrictions, quotas, exchange restrictions, and many other devices to frustrate the free interchange of goods exist in every country of importance to-day.

3. With Ireland we are actively pursuing an economic war, which can but end in irremediable damage to us and ruin to the Free State. The principle of " give and take " is imperfectly understood, and but little practised.

4. India presents the most complex and vital problem which we have probably ever been called upon to solve in the course of Imperial development.

5. Germany, once a great, and still an essential, unit in European economy, is passing through an agony which we cannot fully appre-

ciate, since we have been happily spared from anything like it. Slowly she is groping her way through a sea of disorder to stability, and whether she will be successful no one can foretell. For the moment Herr Hitler, the naturalized Austrian, has received a rebuff, but the political pendulum may swing again in his favour, and he will then be obliged to accept power and shoulder the responsibility which it brings. If this occurs the stability of Europe may be again assailed. The right to re-arm; the repudiation of further reparations payments; the return of colonies, are German demands which cannot fail to have the most violent reactions, especially in France. And in the midst of all this turmoil no one disarms because of fear for the future. Vast sums must be spent on preparation for war because man has not yet learnt how to prepare for peace, and barbarism practised elsewhere must be prepared against by us.

6. The situation in China is overshadowed by events in Manchuria, and Japan is not in the least bit likely to accept dictation from the League of Nations.

In the midst of all this the Russian Colossus plods on, knee-deep in the blood and sweat of the people, in search of the millennium, which she has yet to learn cannot be founded on force; but she, at any rate, is probably the only nation who knows what she wants, and is using all the means in her power to get it.

But the greatest tragedy of all in this welter of confusion, is the seeming helplessness of man to get himself out of his difficulties. The world is rich, richer indeed than it has ever been, yet misery and the poverty are widespread.

Most of our evils to-day are attributed to the Great War, especially by those who like to economise in thought, but this is by no means entirely the case, for the trouble began when we began to be prosperous. Examine the matter a little.

The Part of Trade.

The following figures of British trade speak for themselves, and they speak with a sufficient emphasis to show that it has had a declining tendency for some years:—

		<i>Imports.</i>	<i>Exports</i>	
1924	..	£343,483,000	£663,173,000	Produce and Manu- factures.
1931	..	985,323,000	435,132,000	
1924	..	£217,095,000	£513,498,000	Manufactured Goods.
1931	..	288,093,000	326,305,000	

They further mean that comparing 1931 with 1924,

- (i) Total retained imports rose by 17 per cent.
- (ii) Imports of manufactures rose by 32 per cent.
- (iii) Total British exports fell by 34 per cent.
- (iv) Exports of British manufactures fell by 36 per cent.

A further emphasis on the decline of our trade can be seen from the following :—

1913	.. Our visible exports paid for 82 per cent. of our imports.
1929	.. Our visible exports paid for 71 per cent. of our imports.
1931	.. Our visible exports paid only for 52 per cent. of our imports.

Our position in 1931 was that we purchased £70 millions more of manufactures than in 1924 ; we purchased £12 millions less in raw material ; and we exported £187 millions less in manufactured goods. Since the £ sterling is no longer on the gold standard, the maintenance of its value and purchasing power depends upon trade and general confidence.

The industrial revolution, the result largely of the inventive genius of our people, and their careful and skilful adaptation of their inventions to industry, gave us an enormous start in international trade, and with no potential competitors at the start. As a result, we were able to pave the way for further development. Under a fiscal policy of Free Trade our progress was enormous, so much so that we were able to invest vast sums abroad in productive enterprises which have been instrumental in developing our own Dominions and Colonies, and not least, India. All this was possible with a favourable balance of trade. Came the day, however, when other countries began to realise the source of our wealth and influence, and, under a tariff system, have developed their own industries, without fear of interference from us. This we have allowed to continue, even to the exploitation of our own home market. Not only has our trade languished as a result, but our funds for investment have dwindled so far that last year there were none available for this purpose. From the world point of view this would not have been such a serious matter if other countries, nursing the proceeds of their favourable balances of trade, had invested them in the same world-wide fashion as we have done, but they have not done so, and development has been retarded. This is, without doubt, a vital factor in the present world situation.

National Expenditure.

Our eclipse in the world of trade does not seem, however, to have disturbed us very much, for our national expenditure produces a picture which should appeal to the most apathetic. The average man may feel a sense of pride in the wealth of his country when he contemplates a budget of some £800 millions, but his approbation tends to diminish when he realises that for three months of the year, if he is nowadays unfortunate enough to be a taxpayer, he works for the State, for that is what the State's share has come to be. The following figures show the situation at a glance, and, if considered in conjunction with the trade figures just given, indicate, if they indicate anything at all, that there is something wrong with a mentality which increases its expenditure the while its income is rapidly diminishing. That this has now been realised is true, but the realization has come none too soon.

1930-31 Estimated

Revenue. . .	£766,000,000	Expenditure . .	£723,341,000
1931-32 Do. . .	£766,000,000	„ . .	803,366,000

Actual revenue declined by £9,895,000, but actual expenditure over estimated increased by no less than £71 millions. The differences were met by additional taxation. The seriousness of the process was acknowledged by Mr. (now Lord) Snowden, the Chancellor of the Exchequer in the first National Government when he said :

“ We are far away the most heavily taxed country in the world.

It is true the resources of the country are great ; but they cannot continue to be mortgaged for current expenditure.”

A further comparison can be made from the following :—

	1906	1931
National Expenditure . .	£123,000,000	£804,000,000
Income-Tax . .	1/- in £	5/- in £ with additional surtax up to 5/6.
Social services . .	£18,000,000	£237,000,000
Unemployment benefit . .	Nil	£132,000,000
Proportion of national income for		

taxation and local taxation . . One thirteenth. One quarter.

In 1914 the total amount raised in rates was just over £71 millions ; in 1930, £155 millions ; while in 1927-28 the expenditure of local authorities amounted to over £400 million, and the outstanding loan debts

were no less than £1,121,259,000. Space does not permit of further examples. The cause of the decline in our trade has been suggested. The internal burden of Great Britain has been briefly sketched, and it now remains to deal with two outstanding problems which have added much to our afflictions—the monetary situation and war debts and reparations.

The Monetary Situation.

Previous to the financial crisis in Britain last Autumn the interchange of commerce throughout the world was carried on in the main on the gold standard as the basis of exchange.

There are three types of this standard.

1. *The Full Gold Standard*, which provides not only for the gold backing of the paper currency at par, but also for the settlement of international obligations in that metal, where no obstacles are placed on its purchase at a fixed price. This was probably existent only in pre-war Britain and U. S. A.
2. *The Gold Bullion Standard*.—This was our system until last year. Gold is the measure of value but not the medium of exchange, but it had a free market at a fixed price at the Bank of England.
3. *The Gold Exchange Standard*.—Adopted by countries not strong financially, and who bought gold by the sale of credits. The Free City of Danzig is a well-known example of this kind.

The events which led up to our abandonment of the gold standard are sufficiently well-known. Our action was quickly followed by others, and those who follow sterling to-day balance fairly well those who cling to gold.

By our action then we placed our ability to pay our way, not for the first time, on a confidence basis. Exports must pay for imports. This has led to a depreciation in our exchange, in terms of gold, as can be seen from the daily quotations, but, while it is true that our purchases abroad from gold standard countries cost us some 25 per cent. more, a considerable advantage is afforded to our export trade. But no country can trade for long with an exchange suffering with St. Vitus's dance, and, in order to prevent wide fluctuations, the Government this April formed an Exchange Equalization Account of £150,000,000 by means of which it is hoped to give a certain stability

to sterling by systematic purchases from the fund. So far the scheme has worked well, but many risks are involved, and what the world needs most to-day is a new and stable money economy. Depreciated currencies and exchange restrictions which are to-day worldwide, are the most fruitful source of a diminishing world trade, and a World Economic Conference to deal with these matters is to assemble at the end of the year. This is another of those vital reconstruction conferences which must succeed, for unless it does trade must collapse.

War Debts and Reparations.

The extent of the war debts and reparations are given in the Appendix and are reproduced from the *Economist*. Their magnitude needs no emphasis. On the conclusion of the war Great Britain, in the Balfour note, suggested a complete cancellation of these debts, a proposal which the U. S. A. would not entertain. In view of this refusal we were obliged to lay down the principle on which we would accept payment. This was to the effect that we could not consider our liabilities to the U. S. A. as isolated transactions. This attitude was expressed in the following words:—

“ The policy favoured by His Majesty's Government is, as I have already observed, that of surrendering their share of German reparations and writing off, through one great transaction the whole body of inter-allied indebtedness. But, if this is found impossible of accomplishment, we wish it to be understood that we do not in any way desire to make a profit out of any less satisfactory arrangement. In no circumstances do we propose to ask more from our debtors than is necessary to pay our creditors. And, while we do not ask for more, all will admit that we can hardly be content with less.”

Following on the refusal of the U. S. A. to cancellation came their proposal for the funding of the debt. The principal of £850,000,000 at 5 per cent. per annum had by this time reached the total of £957,000,000 and Congress proposal was that this should be repaid in 25 years bearing interest at $4\frac{1}{2}$ per cent. per annum. The Baldwin negotiation affected considerable reduction in these demands, and the settlement made arranged for the repayment in 62 years, the interest for the first ten to be at the rate of 3 per cent., and for the remainder at $3\frac{1}{2}$ per cent. or, in round figures, £33,000,000 for 10 years, and £38,000,000 for 52 years. That we were less fortunate in

our settlement than were France or Italy can be seen from a glance at the Appendix. For whereas our interest rates were fixed at something over 3 per cent. for the whole period, that of France was computed at 1·6 per cent., and of Italy at an even less figure of 0·4 per cent. It is a curious commentary on the position of France that she obtained a "write off" of three-quarters of her debt on the score of penury, and now emerges as the second richest country in the world, with enough gold in her vaults to pay off her debt in one transaction.

The result of the various settlements was that we obtained £17,700,000 per annum from our debtors, and in addition £16,300,000 from Germany by way of reparations. Since our yearly payments to U. S. A. amounted to £32,000,000 per annum this gave us a slight balance, which would be the case until 1962, when receipts and payments were to balance. So far then, we have balanced our debts payments by our debts receipts, but it should be remembered that on account of the delay which occurred before France and Italy funded their debts to us, our payments to U. S. A. had exceeded our receipts by no less a sum than £133,000,000, excluding interest charges, which account for another £64,000,000, allowance for this is made in the series of receipts over payment noted above. But in this case of debts, while man has proposed the growing state of chaos in the world has disposed. Our departure from the gold standard last year, and all that it implies to ourselves and others who have followed our example; the chaotic condition of central Europe, and impending financial disasters in Germany, made the suspension of payments imperative, and led to the Hoover moratorium which ran, in the first instance, until June of 1932 and was later extended to December. One example of the depreciated external value of the £ sterling is here demonstrated. Under the funding agreement with America our yearly gold payments amounted to £33,000,000. To pay the equivalent with sterling at existing exchange rates to-day would require £48,000,000.

Russia might be mentioned here. Her original debt to us amounted to £423,000,000 which, with accrued interest to date totals £1,013,279,000, sufficient it will be observed, to liquidate our entire debt liability with some to spare. But John Bull gains little satisfaction from a contemplation of this fact. Will international debts ever be paid? This is a question which needs to be answered this year. On the existing agreements the answer must be an emphatic

"No," and this without any desire on our part to default. The plain reason is that U. S. A. has made it impossible for us to pay. The facts are simple. The gold stocks of the world amount to no more than £2,300,000,000 at par. The U. S. A. demands payment in gold. and already both she and France between them have collected three-quarters of this available supply; there is therefore not enough left or being mined to suffice. Even if there were, our own trade position, with a threatening adverse balance, and the suicidal tariff policy of the U. S. A. precludes any such possibility. Here is the simple position. We owe U. S. A. a debt, which she will only accept in gold. She has most of the available world gold already. Our trade balance with U. S. A. is adverse, which might mean virtually a settlement in gold. U. S. A. will not permit us to improve our trade position with her because she has imposed tariffs expressly for the purpose of keeping our goods out. Therefore, the U. S. A. can't be paid in gold and won't be paid in goods! It is hoped the answer will be provided by the World Economic Conference. In the meantime uncertainty, which is bad for everybody, exists. There is no other remedy except cancellation by negotiation, and one other course which need not be considered here.

So much for debts. Reparations have worked themselves out, more or less. In the Treaty of Versailles—the peace treaty—the German Government accepted liability for reparations in consequence of war damage. In 1920 these payments were fixed at £13,450,000,000 payable in 35 years, which sum was to be apportioned among the Allies in the following ratios:—

France 52 per cent., British Empire 22 per cent., Italy 10 per cent., Belgium 8 per cent., remainder 8 per cent. Some apprehension as to the justice of this settlement soon arose, and in 1921 the first reparations Commission appears on the scene, and reduces the bill to 132,000,000,000 gold marks, the equivalent of £6,600,000,000 at par. Note this to be three times greater than the existing stock of gold in the world to-day, and yet payment was to be in gold. All sorts of disputes arose as a result of this settlement, and it soon became evident that Germany could not pay anything like the sum demanded. Accordingly, in 1924 the Dawes Commission came into being and produced the Dawes Plan, the basis of which was Germany's capacity to pay. This settled a payment from Germany at the rate of £125,000,000 a year for an indefinite period. In order to assist Ger-

many a loan of £40,000,000 was also floated, by means of which she promptly set about her own reconstruction. This plan augured well of success, and Germany began to show signs of a return to normal commercial activity. In 1923 however she had defaulted on deliveries of coal to France, who occupied the Ruhr with troops, the maintenance of which became a charge on Germany. In 1928 Germany raised the question of the evacuation of the Rhineland, and with it reparations and war debts, and a general desire sprang up for a final settlement. This resulted in the Young Commission, which propounded the Young Plan. Its details should be carefully noted. Reparations were now to be at the rate of £102 millions a year for 37 years, and then at the rate of £80 to £85 millions for 22 years to cover Allied war debts.

These payments were to be divided into two portions. One was an unconditional payment of £33 millions to be paid in any circumstances; the other a conditional payment which could be postponed. Funds for these were to be obtained from the German railways to the extent of £33 millions, and the remainder were to be a charge on the German budget. Further generous assistance was given with the floating of an international loan of £60 millions. The division of payments was settled on the following basis:—

Unconditional payments.

France	..	£25,000,000
British Empire	..	2,250,000
Italy	..	2,100,000

Balance to Japan, Yugo-Slavia and Portugal.

Conditional payments.

France	..	£32,000,000
Great Britain	..	20,550,000, of which £2,665,000 to Dominions.
Italy	..	12,000,000

What Germany has actually paid under these various settlements it is apparently difficult to determine, but a conservative estimate is £500,000,000. The belief that she could pay, or would pay, under the Young Plan was soon exploded.

It was this fact and the rapidly increasing chaotic condition of the world which led the U. S. A., to declare the Hoover Moratorium. Since then a further effort has been made to bring about a final settlement, and on the invitation of Germany, Belgium, France, Italy,

Japan and ourselves the Lausanne Conference was convened. The declaration made by the signatories to the agreement eventually reached is an expressive realization of the state of the world, and the end to which the efforts of statesmen should be directed. It was as follows :—

“ The Powers signatory of the present Agreement have assembled at Lausanne to deal with one of the problems resulting from the war, with the firm intention of helping to create a new order, permitting the establishment and development of confidence between the nations in a mutual spirit of reconciliation, collaboration and justice.

They do not claim that the task accomplished at Lausanne, which will completely put an end to reparations, can alone assure that peace which all the nations desire. But they hope that an achievement of such significance and so arduously attained will be understood and appreciated by all the pacific elements in Europe and the world, and that it will be followed by fresh achievements.

These further successes will be more readily won if the nations will rally to this new effort in the cause of real peace, which can only be complete if it is applied both in the economic and political sphere and rejects all possibility of resort to arms or to violence. The signatory powers will make every effort to resolve the problems which exist at the present moment or may arise subsequently in the spirit which has inspired the present agreement.”

But conference or no conference, German reparations are done with. It is even doubtful if Germany will pay the 3 milliards of gold marks which she has agreed to pay under this new settlement. The ratification depends on the settlement of the war debts as between the Allied powers, Great Britain and the U. S. A., but Herr Von Papen, the German Chancellor, is reported to have indicated that it is a matter of indifference to Germany whether the agreement is ratified or not. War reparations are dead, that is the conclusion of the whole matter, and they have killed themselves. Debts will follow the same road, and Germany may reap the greatest advantage.

Consider the following :—

“ There may be some who are inclined to say, “ Why then do not sensible men of all nations agree at once that the pay-

ment of these debts is impossible, and wipe the whole thing out?" The matter, I fear, is not capable of being so easily disposed of. It must not be forgotten that many economic changes in the internal conditions of nations as well as between them, have taken place since the war. Germany for example, for all practical purposes, may be said to have got rid of her internal National Debt altogether by a form of inflation which brought untold hardships upon her people, and resulted in making her rentier classes almost paupers. France, by a revaluation of her currency, moved, to a smaller extent, in the same direction. Of Austria, Hungary, Italy and other countries a similar story could be told. Take, however, as perhaps of most importance in connection with future international trade relationships, the position of Germany. With no National debt to speak of, were Germany to be freed at one stroke from all indebtedness to the Allies, she would be in an overpoweringly strong position to compete for trade with the rest of the world, and she would have gained that position quite unfairly. Her competition under these conditions, would force other industrial nations either to follow her example by revaluing or repudiating their National Debt, or, alternatively to reduce drastically their standard of living in order to enable them to compete with her for the trade of the world.

The situation in which Germany would find herself, without the necessity of paying war debts or of making reparations payments, would be analogous to that of a factory which had wiped out all its standing charges in the way of outlay for the construction of buildings, plant and the like and was therefore able to show a profit on the sales at prices much below those which its competitors required to realize for their output. Such an advantage for Germany, in spite of her losing the war, would be an unthinkable one for the Allies to contemplate, and, if allowed to materialize, would immediately re-act seriously upon their well-being and prosperity. It would, in all probability lead to a further war.*

What a contemplation! Things are not going to be so easy after all, but the British character will rise to it."

* G. H. Q. of £. s. d. by Sir J. Wardlaw Milne, M.P.

APPENDIX.

U. S. A. WAR DEBT SETTLEMENT.

Debtor.	Total Debts as funded. \$ '000.	Total Annu- ties payable. \$ '000.	Percentage of present value to total debt. %
Belgium ..	417,797	727,831	53·9
Czecho-Slovakia ..	115,000	312,811	80·0
Estonia ..	13,831	33,331	82·4
Finland ..	9,009	21,695	82·3
France ..	4,025,387	6,847,674	49·6
Gt. Britain ..	4,604,128	11,104,965	82·3
Greece ..	18,128	19,455	34·8
Hungary ..	1,940	4,693	82·3
Italy ..	2,042,199	2,407,678	25·9
Yugo-Slavia ..	62,857	95,178	31·9
Latvia ..	5,780	13,959	82·3
Lithuania ..	6,032	14,532	82·3
Poland ..	178,565	435,688	82·2
Rumania ..	44,594	122,506	78·9
Total ..	11,525,247	42,162,996	..

PAYMENTS DUE TO AND FROM GT. BRITAIN UNDER THE WAR
DEBT SETTLEMENTS AND THE YOUNG PLAN.

Year ending December 1931.	War debt receipts £'s (millions).	*Reparations receipts R. m (millions).	†Payments to U. S. A. \$(millions).
1935 ..	18·25	444·8	181·66
1945 ..	18·9	439·1	182·0
1955 ..	18·9	444·2	181·35
1965 ..	20·4	400·6	180·63
1975 ..	20·65	344·6	185·93
1985 ..	20·65	414·1†	..

* Years ending March 31, 1936, 1946, etc. (British Empire).

† Year ending June 30.

‡ This figure corresponds to the excess under debt receipts of Great Britain over war debt payments in 1935-36.

N.B.—These figures take no account of the repayment of the instalment suspended during the "Hoover" year, 1931-32.

BRITISH WAR DEBT SETTLEMENTS.

Debtor.	Total debt as funded £ '000.	Total annuities payable £ '000.	Percentage of present value to total debts. %
France ..	599,628	799,500	42·6
Italy ..	560,000	248,000	15·5
Yugoslavia ..	25,591	32,800	37·9
Greece ..	21,441	23,550	35·4
Rumania ..	18,448	31,250	45·5
Portugal ..	20,134	23,975	39·0
Total ..	1,245,242	1,159,075	..

WAR DEBTS AND REPARATIONS RECEIPTS AND PAYMENTS OF ALLIED AND ASSOCIATED POWERS UP TO JUNE 30, 1931.

(All conversions made at former pars of exchange.)

<i>Receipts.</i>	<i>U. S. A.</i> £ '000	<i>Gt. Br.</i> £ '000	<i>France.</i> £ '000	<i>Italy.</i> £ '000	<i>Belgium.</i> £ '000	<i>Yugoslavia</i> £ '000	<i>Rumania.</i> £ '000	<i>Portugal.</i> £ '000	<i>Greece.</i> £ '000	<i>Japan.</i> £ '000.
*German reparations (including Belgian debt, Hague annuities, etc).	16,700	121,000	273,000	58,700	126,200	34,200	5,600	4,000	2,100	4,000
†War Debts	434,400	71,300	500	100	..	..	..	..	..	..
‡Austrian, Hungarian and Bulgarian reparations, and Czechoslovak liberation debt ..	..	200	200	1,400	160	2,300	200	10	1,000	10
<i>Payments.</i>	451,100	192,500	274,300	60,200	126,300	36,500	5,800	4,010	3,100	4,010
§War debts	..	326,200	109,400	31,300	7,200	1,500	1,800	1,500	1,700	..
Hague annuities	..	..	1,600	900	300	..	..	..	..	..
	..	326,200	111,000	32,200	7,500	1,500	1,800	1,500	1,700	..
Surplus or deficit	+451,100	-133,700	+163,300	+28,000	+118,800	+35,000	+4,000	+2,510	+1,400	+4,010

* Receipts in respects of armies of occupation ceded properties and cables have been excluded. Service of the German international (Young) loan has been included. Surplus proceeds of liquidated property are included in the case of Great Britain; in the case of other credit of countries they are understood to have been small.

† Including payments made before funding.

‡ Excluding receipts in respect of armies of occupation, ceded properties and cables, and surplus proceeds of liquidation.

THE BALLAD OF THE BELGAUM BOARDERERS.
(AFTER KIPLING'S BALLAD OF THE 'CLAMPHERDOWN'.)

BY "PIERIAN SPRING."

It was the Belgaum Boarderers
Would force our Frontier law
On Zakka Khel and Yusufzai,
Wherefore they studied ' x ' and ' y '
To fit them for Hill War.

One hour's parade they did a day
(To exercise their mules),
And then, although the sepoy's cursed,
The rank and file perforce dispersed
To learn in various schools.

Through manuals in half foreign tongue
And wholly foreign script
They droned, ignoring punctuation,
So when they came to do translation
No wonder that they tripped.

They struggled with the map's " iskel, "
With " Kur-din-hit " * and bearing,
With norths, magnetic, grid and true
(Myself, I only mastered two
And that with sweat and swearing :)

With those weird sums we did at school,
Set by some idiot chap :—
' How long a certain pipe must flow
' To fill a tank, when down below
' There runs an open tap. '

They learnt that Canada grows wheat ;
The value of Gibraltar :
That no man could command in War
Till, map-wise, he'd found Singapore,
Aden, Port Said and Malta.

Small time being left, by Tewts they learnt
Of war on modelled sand :
And, clustered round the school sand-table,
On this foundation most unstable
Was trained this fighting band.

*" Kur-din-hit "—Co-ordinate, a phonetic spelling actually seen in a 1st Class Certificate Examination in 1930.

The frowning hills in pigmy scale
They picquetted in theory,
Those hills which, lying in their reach,
Full-scale and grim, alone could teach
To fight the tribesmen wary.

Meantime their British Officers,
In stuffy office pent,
Wrote reams to show the C. M. A.
How Havildar Fulana's pay
Was drawn, disbursed and spent.

Or from within or from without
They did or suffered audits
On forage, pay, on clothes and gear,
And earned, if ledgers were quite clear,
Higher Commanders' plaudits.

Three days a week they boarded arms,
On two they boarded men :
A fore-end split, a bay'net bent,
A shin abraded—to boards they went,
Who plied a busy pen.

And ev'ry littlest thing they wrote
The C. O. countersigned,
Contingent bills, reports galore,
Returns, pro-formas by the score
Till he was nearly blind.

One day each month he sat and signed
Each School Certificate :
Weary and yet buoyed up with pride
" I'm glad "—involuntarily he sighed—
" These aren't in triplicate."

Once yearly thirty-three per cent.
Of trained men he ' turned over ' :
Lest men should really know their arm
Too well and thereby come to harm
By living soft in clover.

Thus men, who after three hard years
 Could read the helio's flickers,
Were taken from this technique skilled
 (While raw sepoy's their places filled)
To work L. Gs. or Vickers.

So ev'ry year platoons were changed,
 Sections disintegrated,
Personal knowledge got a blow,
No officer his men could know,
 So quickly separated.

Meantime the ignorant Pathan,
 Who could not sign his name,
Noted and marked with knowing smile,
Wherein lurked centuries of guile,
 This unit as fair game.

Young bloods, whose trigger fingers itched,
 Flouted our Government :
Misdeeds increased in open form,
Until the Boarderers of Belgaum
 To war with them were sent.

Then up the peaks they'd never trod
 They sent a panting picquet,
Which suffered on those jagged hills
Ambushes and a thousand ills,
 Which seemed to them not cricket.

The Vanguard, Tewt-trained for the plains,
 Its picquets far outran ;
While, as per book, it sought to seize
Good tactical localities
 'Twas scuppered to a man.

“ Colonel, the Vanguard is wiped out
 “ The enemy can shoot.
“ As yet no foeman has been seen,
“ O Sahib, explain what this can mean ! ”
 He answered “ Hold a Tewt. ”

While they discussed, from that close peak
 Whereon the picquet fell,
 The foe well-hidden, looking down,
 Shot fast and true into the brown
 And made that nullah Hell.

“ Colonel, their bullets fall apace,
 “ While ours fly all abroad :
 “ Our Lewis guns are firing ill,
 “ New gunners do not know the drill. ”
 And he answered “ Hold a board.”

The Main Guard leaping o’er the slain,
 By whom their path was dammed,
 Attacked beneath M. Gs.’ support,
 But as the gunners were half-taught
 The stutt’ring Vickers jammed.

“ Colonel, our covering fire has ceased
 “ So our attack is vain :
 “ Our mainguard’s lost nigh every man.”
 He said “ I’ll make a fire-plan
 “ As we did on the Aisne. ”

E’en as they planned, a Ghazi rush
 Hacked through the column’s head,
 Beneath the shearing tribal knives
 The wounded lost their flickering lives,
 And the nullah’s floor ran red.

Platoon Commanders scanned I. T.,
 While some read F. S. Regs.
 In Persian-filled vernacular,
 But others, less particular
 Made good use of their legs.

Until in flight towards the rear
 They met their old S.—M.
 A pre-war, pre-school veteran,
 A simple, unspoilt fighting man,
 Of stoic calm and phlegm,

In mighty voice " *Aie ! Pundit-jis !*
" O book-ridden *Babus !*
" List *now* to me and ye shall learn :
" Halt there, you ! Rally ! About turn !
" And now your bay' nets use ! "

At these fierce words with him ahead
They turned in fiery charge
And drave the hacking Yusufzais,
Taken in flank and by surprise,
Beyond the nullah's marge.

Red mist before their eyes drove out
All thought of small red books :
As, when recruits, they'd once been taught,
They thrust and jabbed and even fought
With swinging butt-end hooks.

The tribesmen would not face this wrath
Nor the cold steel's ugly rip :
And ere they could resume the fight
The S—M used the short respite
To 'scape from their close grip.

" Ye are," he cried, " as slow-brained byles
" That plough beneath the collar !
" Think ye, recruited at ripe age,
" A man through any printed page
" Can e'er become a scholar ? "

" The Sahibs may be can read and write
" At the tender age of six :
" But ye, who come from farm and byre,
" Cannot, whate'er the Sahibs desire,
" Learn more than Babu tricks ! "

" Hear ye ! I take my pension now,
" Too old to learn anew :
" But recollect this day, ye mutts,
" For the trade of fighting ye need *Guts*,
" And nothing else will do ! "

L'Envoi.

I have written the tale of an unit
For the high Olympians' mirth,
In jesting guise ; may be they're wise
And know what the jest is worth.

(R. K. adapted).

THE BATTLES OF THE MASURIAN LAKES.

BY LIEUTENANT-GENERAL N. GOLOVINE, C. B., LATE RUSSIAN
GENERAL STAFF.

PART II.

In the October number of the Journal, General Golovine gave an account of the concentration and advance of the Russian Second Army under General Samsonov, and graphically described its unpreparedness for so hurried an offensive. By the 23rd August 1914 the Second Army had crossed the German Frontier and reached the line Ortelsburg-Neidenburg-Lensk but the troops were exhausted and behind them was the complete disorganization of the administrative services. The unfortunate General Samsonov telegraphed to Army Group Headquarters in response to their demands for a swifter advance, "It is essential to organize the lines of communication, which has not yet been done. The country is devastated. The horses have long been without oats. There is no bread. Transport from Ostrolenko is impossible."

THE APPROACH OF THE RUSSIAN SECOND ARMY AND GERMAN EIGHTH ARMY TO THE BATTLEFIELD.

The Second Army continues its Advance.

On the 23rd. August General Samsonov issued the following orders:—

The VIth. Corps to remain in the Ortelsburg area, the XIIIth. to move forward into the Jedwabno—Omulefoten area, the XVth. to advance on Lykusen and Seelesen, the 1st. to remain at Soldau, and the 2nd Infantry Division (of the XXIIIrd. Corps) to move to Klein Koslau.¹

On the 23rd. August the prognostications of General Samsonov were justified. The XVth. Corps encountered determined German resistance in the fortified position of Orlau—Frankenau, which had been occupied by the 37th. German Division. Westward of Frankenau to Thurau, along both shores of Lake Kownatken, was the 70th. Landwehr Brigade; from Thurau to Gilgenburg was the 41st. Infantry Division, and Westward of Gilgenburg was Unger's Division. Thus

¹ See Diagram No. 2.

there were 14 battalions, with 12 batteries, against the XVth. Corps on the front Orlau—Frankenau—Janushkau. By a powerful artillery fire the Germans prevented the 14 batteries of the XVth. Corps from taking up a position, and its infantry from approaching. The Commander of the XVth. Corps then decided to get as close as possible to the enemy position during the 23rd. August, with the object of attacking at dawn on the 24th.

“When dusk was approaching,” writes General Martos (Commander of the Russian XVth. Corps) “a message was brought me from the corps wireless station; a pretty badly composed report stated that General Mingin’s detachment¹ had become panic-stricken and had fled towards the Russian frontier. Upon inquiry it turned out that no one of our stations had transmitted this despatch. It had evidently been fabricated by the Germans. The Liaison Officer with General Mingin then reported to me that all was well with the 2nd. Division, which had bivouacked for the night at the point specified in army orders. I concluded from this that the Germans were either awaiting the arrival of reinforcements, or wished to retreat with impunity, and so desired to delay my attack with a scare about a panic in General Mingin’s column.

“I therefore issued orders to the corps to attack the enemy at dawn on the 24th. August without awaiting artillery preparation for the attack.

“I then asked General Klyuev to deal a blow against the German left flank with part of his troops, and specified the time and direction. I also despatched a copy of this request to the Army Commander, asking him to afford me support in this operation.”

On the evening of the 23rd. August it was learnt that one of the regiments of the 8th. Infantry Division was retiring. The Corps Commander himself rode forward and re-established order in the regiment, but in view of this disorganisation General Martos considered it essential to secure the position of the corps by forming a reserve. To create this he had to withdraw Colonel Novitsky’s Brigade, which, according to the original idea of the Corps Commander, had been intended to deal to a blow against the right flank of the German position. The desire of the Corps Commander for his cavalry to turn the left flank

¹ General Mingin was the G. O. C. 2nd. Infantry Division. (Author’s note).

of the German position was likewise unfulfilled. "The Orenburg Regiment," writes General Martos, "was roaming for much of the night in rear of the battle position of the corps, but nevertheless made no sally against the enemy's flank. The remaining troops, in fulfilment of corps orders, in the dark got up into close contact with the fortified position of the enemy, and at dawn made a simultaneous and violent attack against it."

"The Germans apparently were not expecting an attack, and after stubborn resistance at strong points, began to retreat from them in disorder, abandoning their wounded. The whole of the battlefield was covered with corpses and dead horses, articles of equipment, rifles and abandoned vehicles, amongst which were several damaged motors. Two guns and several machine-guns were captured by the 2nd. Brigade of the 6th. Division. In addition, several officers and about a hundred men were captured. The German officers, in accordance with warnings received from above, expected to be straightway shot, and were overjoyed to learn that their lives were not in danger.

"The retirement of the Germans was so rapid that the troops of the corps, being at the point of exhaustion, could not pursue them far. Unfortunately the infantry regiments of the corps had suffered heavy losses: three regimental commanders had been killed, the best battalion commanders had become casualties, killed or wounded, as also many officers and 3,000 lower ranks."

Unquestionably the threat of having their left flank turned by the XIIIth. Corps was a factor contributing to the hasty evacuation of their positions by the Germans. General Klyuev, the Commander of this corps, during the night preceding the 24th. August had sent one infantry division (the 1st.) to the front Lindenwalde—Orlau to co-operate with his neighbour in the turning movement. The enemy after close observation of this area from the air, swiftly retreated north-westwards. There was only one engagement, the 2nd. Infantry Regiment being in action at Persing (to the South of Kurken).

The same day that the guns of the whole corps were speaking at Orlau and Frankenau, a lively exchange of telegrams was proceeding between the Second Army Headquarters and Army Group Headquarters. By this date, *i.e.*, the 23rd. August, Second Army Head-

quarters had received the following information concerning the enemy : he was retreating upon the whole front, but was resisting with most determination to the West of the Forest of Napivod, between Willenberg and Neidenburg ; documents found in the examination of the killed and wounded had established the presence of the XXth. Corps, reinforced by Landwehr units. The collation of all the data collected by the troops concerning the grouping of the enemy's forces enabled the staff of the army to present the Army Commander with a picture sufficiently close to actuality. These data revealed the fact that up to about the 20th. August there had been roughly two infantry divisions in the Ortelsburg and Jedwabno area. (Actually there had been the 37th Infantry Division at Ortelsburg and the 41st. Infantry Division to the South of Jedwabno—i.e., both the divisions of the XXth. Corps). A German report dated the 21st. August, intercepted by our cavalry, provided the certain identification, that upon this date the 37th. Infantry Division had been at Kurken, and the 41st. Infantry Division at Jedwabno. Consequently it appeared certain that the Germans were withdrawing upon their right flank, but there was no reason to infer from this that they were retreating to Osterode, as this enemy withdrawal might also have been executed with the object of concentrating on the line of the lakes, between Hohenstein and Lautenburg. This would provide for the defence of the Deutsch Eylau line of operations, and was in fact the actual course adopted.

The extract quoted above from the memorandum of the Chief of Staff of the Second Army, in which it is asserted that General Samsonov and his staff fully realised that the axis of the Second Army offensive ought to have been the line of operations upon Deutsch Eylau, when compared with a telegram sent by the Second Army Commander on the afternoon of the 23rd. to Army Group Headquarters, must cause some astonishment on the part of the student. In this telegram General Samsonov asked for the sanction of the Commander-in-Chief of the North-Western Army Group to change the *Directive* as regards the demand made for an attack on the front Rastenburg—Seeburg, altering the objective of the further offensive of the Second Army and making it the front Allenstein—Osterode.¹ Moreover, as proof of the necessity for this alteration, the following considerations were brought forward in this telegram : (a) the Second Army would be better

¹ See Diagram No. 1.

fulfilling the basic object of the offensive by operating across the line of retreat of the enemy withdrawing before the First Army; (b) the railway line Mlava—Soldau would provide a better base for the Second Army; (c) the subsequent offensive into the heart of Germany would be easier from the line Allenstein—Osterode than from the line Rastenburg—Seeburg.

It is evident from this telegram that General Samsonov, renouncing his original idea, was suggesting a compromise between it and the demands of General Jilinsky. But in fact an offensive against the front Allenstein—Osterode, although less disastrous than advancing due North, as it would still be possible in some degree for the army to wheel Westward in case of an enemy offensive from the front Gilgenburg—Lautenburg, nevertheless did not preclude the danger of a blow in flank. This danger could only be averted by an immediate offensive by the whole of General Samsonov's army against this front, *i.e.*, due West, and not North-Westward, as proposed by General Samsonov in his telegram. It is difficult to suppose that General Samsonov lacked the courage to express definitely to the Commander-in-Chief his own point of view regarding the operations, and so one must seek a solution in the inefficiency of the Second Army Staff. With the disorganisation which was supreme among this staff, we should not be surprised to learn that Army Headquarters had as yet taken no measure to obtain the information necessary to enable the Army Commander to reach a decision. In actual fact no instructions for the intelligence service had been issued to corps and to cavalry divisions. Similarly we should in no wise be surprised to learn that the reports of the XVth. and Ist. Corps, which were of great importance from the point of view of strategy, had become submerged under the torrent of unimportant reports and telegrams to which the Army Commander had to give his attention. The object of the work of the General Staff, if properly regulated, is not to influence the "volition" of the executive commander, but to afford co-operation, by carefully preparing the data necessary for its development, to enable this volition to take concrete form. This preparation should be based upon the real facts of the situation, sifted out from all the material reaching the staff. Further, the staff has no right to be contented even with this very extensive material: it ought to "hunt" information, sending its officers forward to get into direct touch with unit commanders to the end that those factors of the situation which it is in human nature for

subordinates to dislike to commit to paper, or to delay in so doing, may be quickly elucidated by personal contact.

Commencing the operations of the army, with strategical conceptions so sound as those expounded in General Postovsky's memorandum, but with conceptions radically incompatible with the ideas of the Commander-in-Chief of the Army Group regarding the operations, it would seem that the staff of the Second Army should have displayed special energy in the search for information respecting the enemy. As an elementary measure to this end, it seems obvious that officers of the army staff should have been detailed to Headquarters of the Ist. and XVth. Corps during the first days of the march into Eastern Prussia, to enable the "eyes" of the Army Commander to distinguish at once the first signs of the danger into which he was running—moreover, according to General Postovsky's statement, a danger which was anticipated. This was not done.

The reports of the staff, apparently, were framed in the form of abstract statements and presentiments, but gave no assistance, by means of clear and concrete appreciations, towards arriving at the proper decision. Under such conditions the resolution and "volition" of an executive commander becomes considerably weakened and influenced in the direction of compromise.

Nevertheless General Samsonov's telegram caused considerable dissatisfaction on the part of General Jilinsky. The Commander of the Second Army was censured for failing to fulfil the Army Group *Directive*, and subsequently telegram No. 3004, the contents of which were as follows, was despatched to him: "The German troops, after heavy fighting culminating in the victory of General Rennenkampf, are hastily retreating, blowing up the bridges behind them. The enemy has apparently left only insignificant forces facing you. Therefore, leaving one corps at Soldau, and securing the safety of your left flank by echeloning it back as necessary, you are to execute a most energetic offensive against the front Sensburg—Allenstein, which I order to be captured not later than the 25th. August. The object of your manœuvre is to attack and intercept the enemy retiring before General Rennenkampf's army, in order to cut off the retreat of the Germans to the Vistula."

What strikes one above all on reading this telegram, is that even the simple operation of drawing circles on the map would have shown that the suggestion with regard to intercepting the enemy retreating

before the First Army by sending the Second Army due North was completely fantastic. No less fantastic was the whole plan of straying across Eastern Prussia, with its numerous railway lines, which permitted the Germans in the course of a few days to create in whatever area they wished a concentration of troops of sufficient strength to cut off General Samsonov's army. The fact that General Jilinsky and his staff built these castles in the air not only with regard to their own troops, but also with regard to the enemy, also calls for remark. "The enemy has apparently left only insignificant forces facing you . . ." writes General Jilinsky, though incidentally he and his staff had absolutely no data upon which to found such an assertion. The actual case was the very reverse. Firstly, from the very beginning forces equal to four infantry divisions were opposite the Second Army: secondly, on the 23rd. August the 3rd. Reserve Division had already reached the XXth. Corps, General Muhlmann's Brigade was arriving, and the leading echelons of the 1st. German Army Corps had commenced to move up. One would suppose that, the higher the commander, the greater the necessity for him to avoid the expression of baseless conclusions: otherwise he can only mislead his subordinates.

But it also appears to be one of the intrinsic peculiarities of "strategic romanticism," that it closes the ears of commanders to the demands of the situation. Their obstinacy in acting without regard to circumstances they erroneously hold to be a display of will-power, while considering the reports of subordinates in direct contact with the realities of the situation to be branded by irresolution. So it was in the case under our consideration. Army Group Headquarters did not believe the information concerning the enemy which had been collected by the Staff of the Second Army; they considered it exaggerated. It was this sort of attitude which necessitated the continual repetition by General Samsonov of reports regarding the exhaustion of the troops and the disorganisation of the lines of communication. This also was considered as a display of "weakness" on his part and consequently, when forwarding to General Danilov, the Quartermaster-General at G. H. Q., in telegram No. 3005, confirmation of the order issued by General Jilinsky to General Samsonov, to continue the offensive Northward, the Chief of Staff of the Army Group commenced his report with the words: "The Comamander-in-Chief has pointed out to General Samsonov the irresolute nature of his actions"

At 7-30 P.M. on the 23rd. the staff of the Second Army issued *Directive No. 4*. This telegram exactly fulfilled the requirements of the Commander-in-Chief, but the interesting point is that it included the following: "The enemy, defeated by our First Army, is hastily retreating from the line of the River Angerapp, covered, apparently, on the flank of our army by units of the XXth. Corps in the Allenstein area." These lines were written at a time when numerous enemy guns had been thundering at Orlau and Frankenau since 4 o'clock in the afternoon, and when a whole Russian corps was unable to overcome the resistance opposed to it 35 versts to the South of Allenstein. To this must be added the fact that it was known in the Ist. Corps on the afternoon of the 23rd. that an airman had seen two encampments of a division each at Gilgenburg. Such behaviour on the part of the staff of the Second Army can only be explained by the supposition that, being in a state of chaos, they did not dare to believe their own information, and preferred to see the situation through the eyes of their stern superiors.

On the 24th. August, having learnt of the withdrawal of the Germans from the Orlau—Frankenau position, General Samsonov again telegraphed to the Staff of the Army Group, requesting a change of the lines of operations for the army. But again an offensive Westward was not in question, but only the compromise by which the army was to be directed against the front Allenstein—Osterode. This time General Jilinsky agreed, and General Oranovsky, his Chief of Staff, telegraphed:

"If it is certain that the enemy is retiring upon Osterode, and in view of the fact that it will not be practicable to cut the enemy's line of retreat on Königsberg, the Commander-in-Chief agrees that the Second Army objective be changed to Osterode—Alenstein, but on condition that the exit between the lakes and Alenstein be covered by one corps, with cavalry, which could most advantageously be moved to Sensburg, and which should execute extensive reconnaissance: similarly air reconnaissance should be carried out in this direction."

The reason for this consent can be found in the Summary of Intelligence concerning the enemy issued by the staff of the Army Group on the 24th. August, in which it was stated: "Contact has been lost with the enemy on the First Army front. According to the statements of local inhabitants he is retreating on Königsberg, and in part

on Rastenburg " Evidently General Jilinsky and his staff had begun to divine that it was impossible for the Second Army to cut the line of retreat of the Eighth German Army on Königsberg. The basic idea of the plan of operations remained the same: the compromise suggested by General Samsonov was in accord. The information to the effect that part of the enemy forces were retreating on Rastenburg was the cause of a further compromise on the part of the staff of the Army Group, namely, the detachment of a whole corps (the VIth.) to cover the former line of operations of the army.

The staff of the Army Group could see from a study of the map, that the area in which the operations of the Second Army must be developed was split up into two parts by the expanse of forest and lake lying between Ortelsburg—Allenstein and Neidenburg:

- (a) the Eastern part, with road-junctions at Bischofsburg, Wartenburg and Passenheim;
- (b) the Western, with a very elaborate network of roads right to Osterode, Deutsch Eylau and Strasburg. The region of forest and lake which formed the central part of the area was traversed by but a single road, leading from Passenheim to Jedwabno—Neidenburg.¹

With the intention of securing the right flank of the offensive of the Second Army against the front Allenstein—Osterode, no decision was possible, save that of strengthening the right flank itself at Allenstein. At Passenheim, where the chain of lakes greatly facilitated the task of covering the rear, an infantry brigade might have been left, to support the cavalry sent forward to Bischofsburg. Under the existing conditions it was nonsense, strategically, to send a whole corps to cover the exit between Allenstein and the principal Masurian Lakes. The matter stood thus: if enemy forces were expected to attack in this direction in strength not exceeding a corps, it would appear criminal to expend two divisions out of the Second Army, already weak, upon this secondary and passive task; but if larger enemy forces were to attack in this direction, then the corps torn from the main body of the Second Army would run a serious risk of separate defeat. This desire of General Jilinsky to insure against every kind of failure was weakening the forces of the very commander of whom he demanded

¹ See Diagram No. 2.

superhuman "resolution." The staff of the Army Group was now amputating another two infantry divisions (the VIth. Corps) from the main body of the Second Army, as a "cover" for the area between Allenstein and the principal lakes. What then was left to General Samsonov wherewith to execute the "resolute" offensive into the heart of Eastern Prussia, now directed against the front Allenstein—Osterode? *Five infantry divisions and 36 batteries.* As we know, the forces at the disposal of General Scholtz, without taking into account the reinforcements arriving for him, from the very beginning amounted to $3\frac{1}{2}$ infantry divisions and 37 batteries!

It should here be remarked that the transfer of the units of the 3rd. Guards' Infantry Division (one of the Divisions of the XXIIIrd. Corps) from Grodno to Mlava had commenced on the 23rd. or 24th. August; at the same time sanction had been accorded to General Samsonov to attach to the XXIIIrd. Corps in addition the 1st. Rifle Brigade from Warsaw.¹ But in view of the speed with which the Second Army was required to operate, this was a belated increase, as the reinforcements could not possibly catch up with the main body of the army.

The very way in which the orders of the Commander-in-Chief were framed—" . . . but on condition that the exit between the Lakes and Allenstein be covered by one corps, with cavalry, which could most advantageously be moved to Sensburg" could but confuse the staff of the Second Army, already uncertain enough in their strategic conceptions, and indeed this staff left the VIth. Corps in an advanced position at Bischofsburg, at a distance of 50 versts from the flank of the army. Consequently the Second Army, with a strength of nine infantry divisions, was spread out by evening upon the lines Bischofsburg (the VIth. Corps)—Alenstein (the XIIIth. Corps)—Osterode (the XVth. Corps and half the XXIIIrd. Corps)—Soldau (the Ist. Corps); i.e., on a front of 120 versts.

The instructions from Army Headquarters altering *Directive No. 4* were only received by corps on the morning of the 25th. August. The XIIIth. Corps, not knowing of this, had sent back the 1st. Infantry Division during the early part of the 24th. August to the

¹ The move of this brigade from Novogeorgievsk to Mlava had commenced on the 25th. August,

place where it had previously bivouacked, in the Omuleföfen area. General Klyuev supposed that for the 25th. August, in accordance with *Directive No. 4*, a march in the direction of Wartenburg lay before him, but, as it turned out, he had now to march on Allenstein. Thus, owing to the lack of organisation on the part of the staff of the army, the already exhausted infantry had to execute unnecessary marches backwards and forwards. On the evening of the 25th. August the Units of the Second Army were disposed as follows:—

The VIth. Corps in the Bischofsburg area, with the 4th. Cavalry Division at Sensburg.

The XIIIth. Corps in the Kurken area.

The XVth. Corps delayed in the area Orlau—Frankenau.

The XXIIIrd. Corps:—

The 2nd. Infantry Division at Lippau.

The Units of the 3rd. Guards' Infantry Division and the 1st. Rifle Brigade—*en route*.

The 1st. Army Corps: in the position Usdau—Meischlitz—Koschlau—Grallau, with one brigade of the 6th. Cavalry Division on its right flank in the area Usdau—Gardienen and one brigade of this division at Lensk.

The 15th. Cavalry Division in the Zielun area.

On the 25th. August the staff of the Second Army received definite information of an enemy concentration in the area Gr. Gardienen—Strasburg, opposite the left flank of the army; on the other hand they received from the Commander of the 4th. Cavalry Division information that considerable German forces had passed through Rastenburg on the 24th. August.¹

One would suppose that the Commander of the Second Army could no longer have had any doubts as to the immediate necessity for wheeling the front of his army westward, to meet the enemy attack threatening its left flank. There are many indications that on this day, the 25th., General Samsonov was seriously perturbed. From the Commanders of the XIIIth. and XVth. Corps General Samsonov could only obtain confirmation of his misgivings. The unauthorised

¹ "Strategic outline of the war of 1914—1918," Part I, by Tsikhovich. Moscow, 1922 (p. 87).

halt of the XVth. Corps at Orlau—Frankenau, although justified by the necessity for organising the supply service of the corps, yet at the same time was doubtless due to the desire of the Commander of the XVth. Corps to facilitate the inevitable Westward wheel of the Second Army. A similar attitude was also adopted by the other (the XIIIth.) Corps Commander. When, at dawn on the 26th. General Klyuev received the Second Army Operations Orders, ordering the continuation of the corps march to Allenstein, he decided to defer the march of the corps until noon, and sent an officer of the General Staff to report to the Army Headquarters. "Being well acquainted with the East Prussian theatre, and with the war games of the senior commanders of the German Great General Staff, and discounting the retreat of the Germans North-Westward, General Klyuev was all the time of opinion that the main blow of the Germans should be expected from the West, say against Neidenburg; the more so as the whole position which had arisen strongly reminded General Klyuev of the situation at the last war game of the German General Staff.

"The Corps Commander set forth all these misgivings in a letter to the Army Commander, in which he insisted on the impossibility of advancing with such haste, as the rear could not keep up, and shells would be exhausted in one good battle; on the difficulty of organising Signals and intelligence, and on the urgent necessity for protecting the left flank, remembering the last war game of the German General Staff."¹

General Samsonov had no such assistance from his own staff. In reply to his misgivings he was given reports proving that the course of action mooted—to attack the enemy assembling in the Gilgenburg—Lautenburg area, the main blow to be dealt by the left flank of the Second Army—"would mean the retirement of the majority of the corps of the army, which would by no means accord with the main idea of the operations to force the Germans, by a swift advance into their territory, to transfer Eastward units from their forces on the Western front." Further force was given to these considerations by the assertion that a decision on the part of the Army Commander to wheel Westward would mean "the entire re-grouping of the army, involving the intersection of lines of communication." That such

¹ "Brief outline of the operations of General Samsonov's Army of the Narev in Eastern Prussia in August 1914," by Fuchs, an officer of the General Staff of the XIIIth. Corps. "Voenny Sbornik" No. 4 (p. 131).

considerations lacked any foundation in fact may be seen from the circumstance that, even on the 25th. August, the Second Army could have swiftly executed the necessary re-grouping, with its front facing West, without any confusion on the lines of communication, and without "the retirement of the majority of the corps of the Army." To do so, it would have been necessary for the XVth. Corps to march as far as the line Skottau—Wiersbau on the 26th. August; the XIIIth. Corps should have been given, in the Kurken area, the day's halt so essential to them, preliminary to moving them on the 27th. into the Waplitz—Michalken area; the 2nd. Infantry Division should have been left halted for the 26th. and in view of the fact that the belated units of the XXIIIrd. Corps (*i.e.*, the 3rd. Guards' Infantry Division and the 1st. Rifle Brigade) had got up to Mlava by rail, a favourable opportunity presented itself for the assembly of the whole of the XXIIIrd. Corps on the left of the 1st., with which object the 2nd. Infantry Division during the following days should have executed a march to Soldau from the area in which they were halted. With the whole army thus wheeled facing West, the presence of the VIth. Corps at Bischofsburg, which was already unnecessary and dangerous, would have become positively absurd. This corps might have been brought from Bischofsburg to Passenheim, which move, in view of the reports received from the 4th. Cavalry Division concerning the march of large German forces through Rastenburg on the 24th. August, ought to have been carried out by night.

The difficulties advanced with regard to the adoption of such a course of action by General Samsonov thus had no existence in the realities of the situation, and a staff so badly informed as to see obstacles where none existed could not have been of any assistance to the Commander of the Second Army.

In defence of General Samsonov's staff it must be said that its work was greatly complicated by the chaos supreme upon the lines of communication. This is well seen from the report rendered by General Postovsky, the Chief of Staff of the Army, by direct wire on the 25th. August, *i.e.*, on the very day upon which his every thought should have been directed towards helping the Army Commander to find a solution of the difficult problem regarding the operations of the army. This report ran as follows:—

" Though fully recognising the necessity for advancing unceasingly and energetically upon Allenstein—Osterode, and beyond, following

up the enemy, the Army Commander has been forced to make a halt. The army has made a continuous advance of 8 days from its starting position, and, in consequence of the delay in arrival of certain field bakeries and corps transport—the latter, moreover, being lower than normal in carrying capacity, as single-horsed carts were received instead of two-horsed—and in view also of the army transport having arrived with a deficiency of 40 per cent. in vehicles, the army has had to be fed entirely with bread brought up from the rear from augmented or private bakeries. With these bakeries a considerable distance away from troops ever advancing away from them, with wretched sandy roads, and with the insufficiency of local fodder, there has been inevitable delay in transport, preventing the punctual supply of the troops with bread, for which reason the troops have consumed some two-thirds of their iron rations, although bread for them was on the way.

“ Apart from this, there was no transport to the Tsyekhanov issue depot, which, according to the instructions of the Commissary of the Armies of the Group, was to be drawn upon for the formation and refilling of supply dumps. It has turned out to be hopeless to depend upon local resources for the maintenance of supplies, as, on the one hand, the stocks in the country are insignificant, and, on the other, some of the regimental commissaries turn out to be quite untrained.

“ While recognising a halt to be absolutely essential for the army, the Army Commander will of course order units to advance at any cost, should the Commander-in-Chief, in view of the general situation, nevertheless consider such an advance necessary.

“ The Army Commander begs to convey to the Commander-in-Chief this report regarding the necessity for a halt, which he personally communicates by telephone, and would add that all his corps commanders urgently request this to be granted, in particular Martos (XVth. Corps) and Klyuev (XIIIth. Corps).”

Between the 17th. and the 25th. August the Corps of the Second Army had marched the following distances :—

VIth. Corps ..about 200 versts (22 versts per day).

XIIIth. Corps ..about 130 versts (16-18 versts per day).

XVth. Corps ..about 120 versts (with a battle on the 23rd.
and 24th. August).

XXIIIrd. Corps ..about 190 versts (21 versts per day).

The corps had been marching through a terrain which was difficult to traverse, in intense heat, driving before them the enemy units which had been covering the frontier. Prior to the 17th. August the corps had covered great distances without a halt, in order to reach their starting positions.

The reply of the staff of the Army Group to General Postovsky's report was as follows: "With regard to a halt, the Commander-in-Chief states that the Second Army offensive has progressed considerably more slowly than he expected. The enemy had already left Insterburg on the 23rd. August, and is therefore at least two marches away from that town. In view of this, the Commander-in-Chief finds it impossible to sanction a halt until the line Allenstein—Osterode has been reached, as only then will it become possible to threaten the enemy's line of retreat to the Lower Vistula."

Army Headquarters was also making efforts to obtain the sanction of the Commander-in-Chief to a Westward wheel of the army. A member of the staff relates the following incident, which to some extent throws light on the psychological conditions under which General Samsonov had to carry out his difficult work. General Filimonov, the Quartermaster-General of the Staff of the Army, had been despatched to the staff of the Army Group, to render a personal report to the Commander-in-Chief regarding the danger threatening General Samsonov's left flank and rear. General Jilinsky entirely disagreed with the considerations laid before him, and demanded an immediate continuation of the offensive into the heart of East Prussia. Moreover, he concluded his remarks, which were couched in the sharpest of tones, by saying: "To see an enemy where he does not exist is cowardice, but I will not permit General Samsonov to play the coward, and demand of him the continuation of the offensive." Those who know the gallant bearing of the late General Samsonov will understand how this must have affected him in his further actions.

As the result, an operation order was issued by the staff of the Second Army on the 26th. August. It contained the following intelligence concerning the enemy. "No change before the front of the XVth. and XIIIth. Corps. At Allenstein there is more than a division of the enemy." On the 26th. August the XIIIth., XVth. and XXIIIrd. Corps were ordered to advance to the following lines: the XIIIth. to the line Kellaren—Darethen, the XVth., to the line Schönfelde—Guse-

nofen, the XXIIIrd. to the main road Hohenstein—Reichenau. The Ist. was ordered to remain in the area it was occupying, between Gilgenburg and Soldau; to safeguard the lines of communication of the army from attack from the direction of Deutsch Eylau. The VIth. Corps, with the 4th. Cavalry Division, was to remain at Bischofsburg, safeguarding the right flank of the army from attack from the direction of Rastenburg. The 6th. and 15th. Cavalry Divisions were to carry out *Directive No. 4*. The Staff of the Army was to be transferred to Neidenburg.¹

The operations order of the 26th. August is a direct proof that the Army command had renounced the ideas by which they had been guided, according to General Postovsky's statement, at the commencement of operations. This order despatched the XIIIth. and XVth. Corps to take Allenstein. It inclined the line of operations of the army further East, even in comparison to the line on Allenstein—Osterode, sanctioned by General Jilinsky after such hard bargaining. Such a decision appears the more strange, in view of the fact that the staff of the Army had been able to ascertain definitely, from reports received by it, the existence of a concentration of large German forces on the front Gilgenburg—Lautenburg. On the 25th. August a report had already been received from the Commander of the Ist. Army Corps concerning an enemy offensive from the direction of Lautenburg and the Damerau Lakes.² Though in possession of all the data necessary to elucidate the situation, the staff of the Second Army were unable to do so, and communicated entirely groundless intelligence to the troops; alleging the presence of "more than a division at Allenstein" and dismissing other areas with a formula—"No change before the front of the XIIIth. and XVth. Corps."

Finally, by a similar use of formulae the Staff of the Army thought to get rid of the danger threatening the left flank of the army. A careful perusal of the orders herein given to the Ist. Army Corps is sufficient to convince one of this. This corps, remaining in the area between Gilgenburg and Soldau, was to safeguard the lines of communication of the army from attack from the direction of Deutsch Eylau. On

¹ The contents of this order are given in Vatsetis' Book "Operations in Eastern Prussia in July, August and the beginning of September, 1914." (Moscow, 1923, p. 72).

² "Strategic outline of the war of 1914—1918," Part I. By Tsikhovich, Moscow, 1922 (p. 88).

the 25th. August the 1st. Corps, with a strength of two infantry divisions and 14 batteries, having already extended its right flank to Usdau, and covering a front of 20 versts, had to deploy covering another 25 versts Northward, following up the 2nd. Infantry Division, which had moved away from it.

On the morning of the 26th. August, impressed by the report dated the 25th. from the 1st. Army Corps Commander, concerning an enemy offensive from the direction of Lautenburg and the Damerau Lakes, General Samsonov decided to postpone the move of the XIIIth. and XVth. Corps, but later, influenced by a conference of the members of the staff, gave up this intention. His staff insisted on the continuation of the march of these two corps, at the same time reinforcing the 1st. Army Corps with the 3rd. Guards' Infantry Division, the 1st. Rifle Brigade and a heavy artillery division, and placing the 6th. and 15th. Cavalry Divisions under the orders of the Commander of the 1st. Corps.

This concluded the work of the higher staffs in getting the Second Army on to the battlefield. One must regretfully state the fact that everything possible had been done to ensure the defeat of our troops in their impending collision with the Eighth German Army. This conflict began on the very next day; the army being engaged in battle on the front Hohenstein—Soldau, and the VIth. Corps fighting an engagement at Bischofsburg.

We must now make a digression, and describe what had been happening on the enemy's side during these days, in order to reveal in its entirety the terrible strategic situation which had been created for the Second Army.

The battle of Gumbinnen had undermined the morale of General Prittwitz, commanding the Eighth Army. He and his Chief of Staff were relieved, and Hindenburg and Ludendorff appointed in their place. The latter was summoned to the German G. H. Q., where he was interviewed, after 6 p.m. on the 22nd. August, by General von Moltke, Chief of Staff to the Emperor. General Ludendorff does not make the nature of these negotiations public in his memoirs, but it is a very reasonable supposition that General Moltke's fundamental requirement was that Ludendorff should continue the active defence of Eastern Prussia at any cost.

Thus Ludendorff, when with Moltke's Staff, was not forced to undertake any heroic enterprise. He occupied himself only in issuing

the instructions necessitated by the task imposed upon the Eighth Army by the German Supreme Command (General Mühlmann's 5th. Landwehr Brigade and a brigade of heavy howitzers were ordered to join the XXth. Corps from the fortress of Thorn).

In his memoirs General Ludendorff asserts that orders were also included in these instructions for the Ist. Army Corps to be detrained in the proximity of the right flank of the XXth. Corps. This assertion, like many others in Ludendorff's memoirs, traverses the facts, as can readily be ascertained by comparing with the memoirs of General François, the Commander of the Ist. German Corps ("Marneschlacht und Tannenberg").

In his memoirs Hindenburg does not attempt to conceal the fact that the fundamental idea of the operations against the Russian Army of the Narev had already been settled before he assumed command of the Eighth Army. The following is his own description of his first meeting with his Chief of Staff, which took place at 3 a.m. on the 23rd. August in the special train which was to take the new Commander of the Eighth Army to East Prussia, and which was already occupied by General Ludendorff, who had come from the German G. H. Q.

"In a few moments I had reached an agreement with my Staff as to the view to be taken of the situation which had arisen. In Coblentz General Ludendorff had already issued the first instructions, which could not be delayed if the struggle was to be continued to the East of the Vistula. Above all, it was necessary not to remove the point of detrainment of the Ist. Corps far back to the East, but to fix it in the Deutsch Eylau area, nearer to the enemy and behind the right flank of the XXth. Corps. No further decisions could be taken prior to arrival at Army Headquarters, at Marienburg. Our conversation hardly lasted half an hour. We went to bed and I used the whole of the time remaining at my disposal to rest."

On the afternoon of the 23rd. Hindenburg and Ludendorff arrived at Eighth Army Headquarters at Marienburg. At this time the Russian XVth. Corps had already come into collision with the left flank of the XXth. Corps, which was disposed in the fortified position Orlau—Frankenau.

The units sent to reinforce the XXth. Corps had commenced to arrive:—

The 3rd. Reserve Division was detraining at Allenstein.

The Ist. Army Corps had commenced its detrainment in the Deutsch Eylau area.

General Mühlmann's Brigade was at Strasburg, under orders to proceed to Lautenburg.

Lastly, the detrainment of General von der Goltz's 1st. Landwehr Division was to commence in three days' time in the Osterode—Allenstein area.

Knowing what was the fighting strength of General Samsonov's attacking army, we can definitely state that the situation of the Germans could not be called critical. It is true that the left flank of the XXth. Corps at Orlau—Frankenau was threatened by concentrated Russian forces, but the commander of this corps, holding on to the position with a part of his forces, was intent only on gaining time, to enable the remainder of his command to complete its march from the Jedwabno—Ortelsburg area to the Gilgenburg area. This manoeuvre, already decided on, as we know, on the 21st. August, and confirmed by General Prittwitz, had of course also been approved by General Hindenburg, and thanks to it the Southern group of the Eighth Army was assembling for a blow against the left flank and rear of the Russian Army of the Narev.

Upon the arrival of all the units above enumerated the Germans would be able to deploy 8½ infantry divisions, with 90 batteries, facing the Hohenstein—Soldau front. In the whole of General Samsonov's army there were only 9 infantry divisions, with 67 batteries, dispersed between Ortelsburg and Soldau.

In the preceding chapter we remarked on the fact that as early as the 21st. August, General Moltke had pointed out to General Prittwitz the necessity for bringing up the XVIIth. and Ist. Reserve Corps to reinforce the XXth., with which object he suggested taking these corps by the shortest routes in the general direction of Allenstein. We also remarked at the same time, that General Prittwitz considered this move extremely risky, supposing a third Russian Army to be advancing along the centre line of operations from Graevo. By the 23rd. August one of the Russian army *Directives* had fallen into the hands of the German staff (apparently General Jilinsky's *Directive* No. 1 dated the 13th. August). This *Directive* had been found in the wallet of a dead Russian officer. It provided quite definite confirmation of the fact that only two Russian armies were operating against Eastern Prussia, and that General Rennenkampf's army had been

ordered to operate to the North of the line of the principal Masurian Lakes, while General Samsonov's army had been directed against the front "Lötzen—Ortelsburg. All General Prittwitz's fears being thus proved baseless, Eighth Army Headquarters sent orders to the XVIIth. and Ist. Reserve Corps, changing the direction of their march: the first was wheeled towards Bischofstein, the second, towards Seeburg. In the execution of these movements, these corps changed their bases to bridgeheads on the River Alle, the first to that of the railway junction of Heilsberg; the second to that at Guttstadt.

The distance gained during the "break away" from Rennenkampf's army, amounting to two marches of the army, also ensured the safety of these Corps from attack from the West in the course of their march South-Westward, the more so as their bases could gradually be transferred to bridgeheads on the River Alle, in the Guttstadt area and South thereof.

Not being yet sure of the "distance gained," the Staff of the Eighth Army quite rightly took measures to guard against any attack on the part of the First Russian Army. Two brigades of the 1st. Cavalry Division were ordered to cover the march of the XVIIth. and Ist. Reserve Corps from Rennenkampf's army. Numerous Landsturm commands and detachments were available to co-operate with this cavalry screen, which was also reinforced by four regiments of the divisional cavalry of the XVIIth. and Ist. Reserve Corps. In addition, to allow of timely support for the covering screen by strong infantry units, the 6th. Landwehr Infantry Brigade, taken from the troops defending the neck of land lying between the principal Masurian Lakes in the Lötzen-Nikolaiken area, was despatched to Rastenburg. With the same object the Commander of the XVIIth. Corps ordered one of his infantry divisions to be echeloned to the South of Schippenbeil.

It pleased fate still further to lighten the task of the Eighth Army Command. On the morning of the 24th. August, while Hindenburg and Ludendorff were on their way from Army Headquarters (Marienburg) to XXth. Corps Headquarters, some intercepted Russian wireless messages were handed to them. These were the radio telegrams which we have already mentioned, from which it was possible to ascertain with exactitude the strengths and grouping of General Samsonov's VIth., XIIIth. and XVth. Corps. By comparing these telegrams with the *Directive* earlier captured, it was possible

to determine that the intercepted telegrams were no enemy ruse, but genuine operations instructions.

The revelations provided by these documents presented to General Hindenburg and his staff a complete picture of the offensive by the Russian Army of the Narev. The right flank corps (the VIth.) of this army was marching from Ortelsburg to Bischofsburg, thus laying itself open to a blow from the German corps converging from the North. All anxiety on the part of the Command of the Eighth German Army regarding the further march South-Westward of these corps must now have disappeared.

The intelligence as to the Russian operations, which had been obtained thanks to the disorganization of our higher staffs, not only facilitated the task of Hindenburg and his staff as regards the course to be adopted in the Bischofsburg area : it also enabled them, with a knowledge of " enemy intentions " unprecedented in the whole of military history, to prepare a blow against the left flank and lines of communications of the main body of the Army of the Narev, despatching 8½ infantry divisions for this purpose.

With what forces could General Samsonov's army oppose this blow ? Seven infantry divisions and considerably weaker artillery.

Nevertheless, on the evening of the same day, *i.e.*, the 24th. August, a telegram signed by Hindenburg was sent by the staff of the Eighth Army to German G. H. Q., the contents being as follows :—

" It has been decided to hold the XXth. Corps position, as retirement therefrom would be equivalent to defeat. The junction with the Ist. Corps has been delayed. The XVIIth. and Ist. Reserve Corps are being brought up on the left flank. Morale is high, although the possibility of an adverse result cannot be dismissed."

This lack of confidence on the part of the Command of the Eighth German Army was due to two reasons :—

1. The left flank of the XXth. Corps had been pinched out and annihilated at Frankenau—Orlau. The valiant exploits of the Russian troops seemed to confirm the pessimism of General Prittwitz.

2. On the 23rd. August strong Russian cavalry units had occupied the village of Gorzno (12 versts South-West of Lautenburg). This intelligence again caused the Staff of the Eighth Army to be apprehensive of an offensive by the left flank of General Samsonov's

army in the area West of the Mlava. An offensive by large Russian forces against Lautenburg would have endangered the Ist. German Corps, coming up on the left flank of the XXth.

The captured Russian *Directive* did not enumerate the forces included in the establishment of the army, and the intercepted radio telegrams were instructions issued to individual corps. The Staff of the Eighth Army had every right to suppose that there were other corps on the strength of the Russian Army of the Narev, the more so, as the air reconnaissance of preceding days had confirmed the existence of a strong concentration in the Warsaw and Novogeorgievsk areas. Hindenburg and his General Staff, like Prittwitz on the day of the battle of Gumbinnen, could not manage to credit the gross blunders of Russian strategy, which were being depicted before them in sober reality.

During the 24th. and 25th. August the situation became still more clear to the Staff of the Eighth Army. An offensive of the VIth. Corps against Bischofsburg was quite definitely indicated. The 4th. Russian Cavalry Division was identified to the East of this corps at Sensburg. The XIIIth. Russian Corps had reached the neck of land between Lakes Lansker and Grosse Plautziger. Further left, it was established that forces were advancing echeloned on the right flank of the XVth. and XXIIIrd. Corps. Finally, it was ascertained for certain that only Russian cavalry were operating in the direction of Lautenburg and West thereof, and that only one Russian Corps, the Ist., was attacking from Soldau.

"The temptation was very strong," writes General Ludendorff in his Memoirs, "to make a detour South of Soldau, in order to turn the flank of the Ist. Russian Army Corps also. The shock of such a blow to the Narev Army, combined with the advance of the XVIIth. and Ist. Reserve Corps, might have led to the complete destruction of the enemy. But our strength was not sufficient for this. Therefore I proposed to General Hindenburg that the Ist. Corps should attack from Eylau and Montowo, together with the left flank of the reinforced XXth. Corps from Gilgenburg, both towards Usdau, with the object of driving the Russian Ist. Corps South from Soldau; thereafter our Ist. Corps was to be sent to Neidenburg, to surround, together with the XVIIth. and Ist. Reserve Corps, at least the main body of the Army of the Narev. *One must learn to limit one's objectives in order to attain success.*"

Upon studying the map, one can at once perceive that the main blow of the Southern group of the Eighth Army would lead to the seizure of all the Russian Second Army lines of communication which passed West of the region of forest and lake between Neidenburg and Willenberg.

The dispositions of the German troops assembling between Lake Mühlen and Lautenburg were as follows on the evening of the 25th. August:—

The reinforced XXth. Corps (General Scholtz) had deployed its two first-line divisions facing South-East between Lakes Mühlen and Grosse Damerau; General Unger's Division was at Gilgenburg. The 3rd. Reserve Division was assembled echeloned to the rear of the left flank of the XXth. Corps, behind the River Drewenz. The 1st. Army Corps was assembled to the South-West of Lake Grosse Damerau, behind the line of lakes stretching from Gilgenburg to Lautenburg.

Lautenburg was occupied by General Mühlmann's Brigade.

For the speedier execution of the plan conceived it appeared essential to expedite the concentration of the 1st. Corps. With this object orders were issued to advance the points of detrainment of its divisions; on the 23rd. and 24th. August the detrainment of troops of the 1st. Division had been taking place at Deutsch Eylau, and of the 2nd. at Bischofswerder; now, with Mühlmann's brigade advanced to Lautenburg, and, under cover of units of the 1st. Corps which had already arrived and had marched ahead, these points of detrainment could be changed to Zajonskowo for the 1st. Division, and to Neumark for the 2nd. "Day and night, train after train, at intervals of half an hour, the 1st. Corps rolled on towards its detraining stations Southward of Deutsch Eylau," writes an officer of the General Staff of the Eighth Army;¹ "instead of the one to two hours laid down in peace time for offloading, echelons were allowed 25 minutes or less. The railway employees worked to the last ounce of their strength. Neglecting all railway regulations, without paying any attention to signals, the trains were driven one behind another on every free sector, in order to reach the platform ordered without losing a moment of the time given for offloading. This

¹ "Mit Hindenburg bei Tannenberg," N. von Stephani, p. 25.

demanding continued and intense exertion on the part of all the railway employees, despite their complete exhaustion. Such a decision was extremely daring. The failure of one single brake might have resulted not merely in loss of life, but in the stoppage of traffic upon a whole section of the railway. But he who takes no risks will win no battles. Everything possible had to be done to expedite the arrival of the Ist. Corps on the battlefield. On the evening of the 26th. August General Hindenburg thanked the officer in charge of railway transport, in the following words: "If we attain great results to-day, it will in large measure be thanks to you."

Despite all these expedients, on the morning of the 26th. the Commander of the Ist. Corps only had 20 batteries out of 30 at his disposal.

In view of the fact that the 26th. August had been fixed for the commencement of the Eighth Army offensive, General François asked General Hindenburg to postpone this commencement by one day. General Ludendorff, who was present during this conversation, insisted that it was impossible to defer the day of attack. General François writes as follows in his Memoirs: "'If the order is given,' I replied, 'of course the troops will attack; only they will be obliged to fight with the bayonet.' Hindenburg remained silent."

At 8-30 p.m. on the 25th. August General Hindenburg issued Army Orders for the 26th. For this day a combined offensive by the Ist. Army Corps and the right flank of the XXth. against the right flank of the Russian Ist. Army Corps, in position at Usdau and to the North thereof, was ordered, with the object of opening the way for the further advance on Neidenburg. The offensive of the Ist. German Corps was directed upon Usdau, and that of the right flank of the XXth. Corps upon Jankowitz. Prior to carrying out this main idea, the Ist. German Army Corps, had to debouch from the line of the lakes lying between Gilgenburg and Lautenburg. This was the first task, and this Corps was ordered to execute it by obtaining possession of the high ground at Seeben by 4 a.m., while the right flank of the XXth. Corps was to co-operate in this debouchment by attacking in the direction of Grieben, against units of the Ist. Russian Corps which had been pushed out ahead, and had entrenched in the Bergling—Grieben area.

During the 25th. August orders had been sent to General Belov, commanding the Ist. Reserve Corps, for his corps, in co-operation with

the XVIIth. Army Corps and the 6th. Landwehr Brigade, to attack the Russian Corps isolated at Bischofsburg, and to try to drive it back to Ortelsburg.

Thus the detachment of the Russian VIth. Corps to Bischofsburg not only exposed it to attack by enemy forces several times larger, but further served as the strategical bait which tempted the Germans to send their Ist. Reserve and XVIIth. Army Corps round in rear of our right flank.

Recalling the information given above as to the remaining Russian corps, it will be seen that on the 26th. the XIIIth. Corps was advancing into the empty air; the extreme right flank of the XVth. Corps at Mühlen must collide with General Unger's left flank division, and in addition, the corps in its further advance in the direction ordered would expose its flank to a blow from the 3rd. German Reserve Division, assembled at Reichenau in full readiness for an offensive. The Commander of the XVth. Corps would have to be very skilful to avoid falling into a trap. The one division of the XXIIIrd. Corps (the 2nd.) was marching in an oblique direction towards the front of the main body of the German XXth. Corps, thus exposing its left flank and rear to it. The Ist. Russian Corps, fettered to the Soldau area, remained with its right flank in the air at Usdau. The farther North the 2nd. Division marched, the wider were we opening by our own action the right half of the gates which had closed the way to Neidenburg to the Germans.

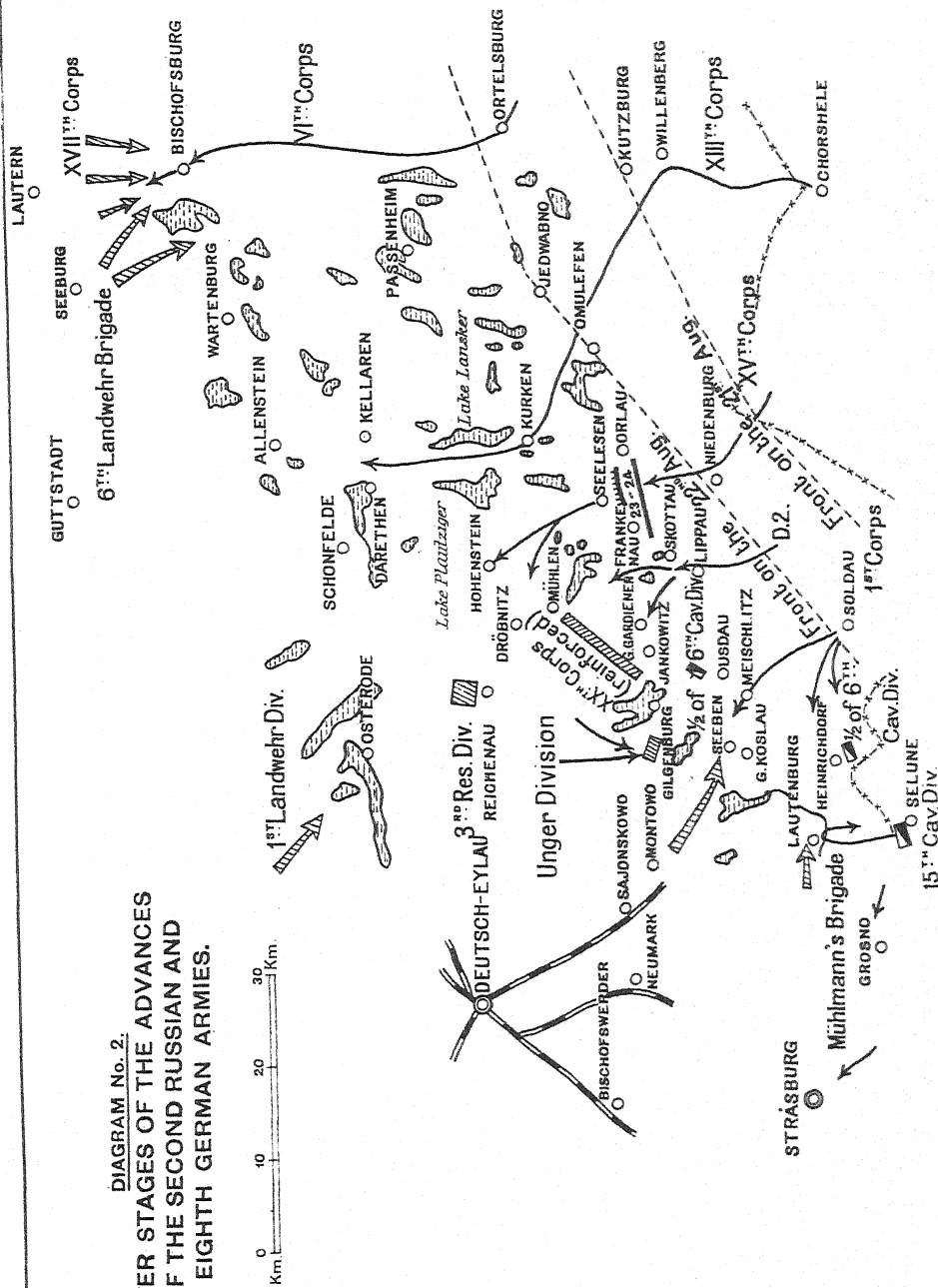
On comparing the strategy of the two sides it is not difficult to foresee the result, which might be likened to that which must ensue were two opponents at draughts to move their men, one playing the ordinary game, and the other the "losing game."¹

(To be continued).

¹ "Poddavki"—a Russian form of draughts, the object being to lose all one's men. (Translator's note).

DIAGRAM No. 2.

LATER STAGES OF THE ADVANCES
OF THE SECOND RUSSIAN AND
EIGHTH GERMAN ARMIES.



GAS IN NEW DELHI.*

By 'MOUSE.'

PROLOGUE.

After the Disarmament Conference of 1932-33-34 a new impetus was given to the jealousy and suspicion which the nations of the world harboured one against the other. During the following two decades the results of this *malaise* were apparent in the growing armaments of the Greater Powers and the increasing number of secret pacts and treaties of non-aggression entered upon by various countries in Europe and in the East. This period marked also a time of intense activity among inventors and scientists, who applied their minds with singular assiduity to better and quicker methods of human destruction.

In 1941 an obscure chemist working in an ill-equipped laboratory in the village of Uzbegachan, forty-two miles north of Womsk, produced an almost odourless gas which he called Thereseene. (He was a sentimental old man and his only child's name was Theresa). When he had proved by test and demonstration to the proper authorities the peculiar efficiency of this new armament the chemist, his wife and the little Theresa were detained in the cells of the yellow-washed police-station behind the Kremlin. Two nights later the little family disappeared. Before he died Boms, the chemist, told a fellow guest that his gas was unique in that one inhalation caused the victim to lose his memory and become partially demented. The brain, he averred, would continue to function plausibly, but the region of the subconscious mind, where the inhibition and inverted complexes were lying dormant, would gain dominion over the rational mind and cause the subject to act in a manner contrary to his normal character. For example, a Kommissar of the Ogpu had been experimented upon with the result that for a whole day the man imagined that he was the offspring of an Indian Congressman and an American lady gosseller. He tried to convert his fellow Kommissars to non-violent evangelism.

THE DECLARATION OF WAR.

As history tells us, in 1952 the Lesser Soviets of Transoxania declared war on the Non-Federated States of India, and all India from the Cauvery to the Kabul rose in arms. Owing to various mea-

* For fuller details of this historical event the attention of the reader is directed to "The Report of the Inquiry Commission on Indian Affairs 1952," of which the distinguished author and chairman was Viscount Rammyswammy, second Earl of Mettupalaiyam. Published by H.M.'s Stationery Office. Price two annas.

asures of disarmament and retrenchment—imposed by politico-sentimental rather than practical reasons—the N. F. States found themselves unprepared for the struggle, and in the initial stages of the war suffered grievous losses. The five great passes fell in the first week, and Quetta and Peshawar were occupied by the advanced guards of the invading armies. Then followed a period which soldiers euphemistically call “peaceful penetration.” Within a month Baluchistan and the Punjab were being actively seduced from their loyalty; Rawalpindi, Jhelum and Lahore had risen in rebellion against the central government in New Delhi and were in the enemy’s hands, the invaders had captured Mach, Sibi and Jacobabad and were advancing remorselessly towards the Sukkur Barrage and the rich port and aerial junction of Karachi. Lahore was being prepared as the hostile Advanced Base.

In New Delhi confusion reigned. On the declaration of war the Hindu Cabinet had resigned and in the resultant election the Muhammadan Opposition had won their first victory under communal electorates. The Muslim fighting programme, their motto, “No Surrender,” and their plagiarised slogan, “What we have we hold,” swept the country, and it is estimated that over twenty-three *per cent.* of the enfranchised electorate recorded their votes. The Muslims won by a small majority. This was due to the fact that in many cases Muslims were returned by Hindu strongholds, the most sensational case occurring in Vellore where the President of the Hindu Mahasaba was defeated by a depressed Oxford undergraduate. But this accession to political power of the minority party divided issues even more savagely than before, and the unhappy history of Muslim politics in India, which had been one long series of schisms and internal jealousies, served only to make chaos more chaotic. The House of Orators became a guerilla arena wherein party strife and partisan rivalries obscured the threat confronting the filiceous nation. All this is ancient history, and elderly members of the now defunct European Association tell of their acute disappointment at the turn of events. The Association had backed the Muslims in the hope that their fighting policy would unite the country. Instead, the House of Orators was the scene of wrangles, long-winded futile resolutions and communal jealousies which disgusted and alarmed all the saner elements of the constitution. Things were no better than in the old days of transition and devolution.

THE ULTIMATUM.

On the 23rd. February, 1952, a squadron of Transoxanian aeroplanes appeared over New Delhi and dropped a sheaf of printed documents on the popular War Memorial bus terminus. At that moment in the House of Orators the Finance Member was defending his Budget which, *inter alia*, demanded a War Vote of ten crores to which the Hindu Opposition had taken violent objection. Such, however, was the temper of the house that a heavy government defeat seemed imminent. Before a division was taken the Prime Minister, the Right Hon'ble Sir Fatty Can, entered and interrupted the acrimonious debate. In a low voice, rigorously controlled so as to avoid any appearance of excitement or alarm, he read :

" The following ultimatum has been sent to my government by enemy air-craft. Unless the North West Frontier Province, Kashmir State, the Punjab and Sind are ceded unconditionally to the United Soviets of Transoxania by noon on Thursday, 25th day of February, 1952, the cities of Lucknow, Benares and New Delhi will be subjected to relentless and ruthless chemical action." A shudder of horror rippled through the assembly. " Notice of surrender," the Prime Minister continued his reading in an even, passionless voice, " should be broadcasted from your radio stations at Bombay and Calcutta, and steps will then be taken for a Round Table Conference of your peace party and our plenipotentiaries at Bagh (in the Afridi country) to discuss details of complete transfer of the ceded territories. This is the first and final warning." The Prime Minister sat down, and the Leader of the Opposition moved a motion of adjournment for the proper discussion of the brutal ultimatum.

This debate was held on the same afternoon in the presence of a crowded house and galleries. Fierce argument, burning patriotism and brilliant oratory were prominent features. All parties appeared to be joined in their noble determination to defy the enemy's threat, a prominent Punjabi landowner offering to place himself at the head of five thousand horse, and a Bengali solicitor assuring the Home Member that if he would only raise the ban on *Detenus* he would guarantee two battalions of terrorists to fight for the honour of their country. The moment appearing propitious the Finance Member again suggested the necessity of increasing taxation to meet the costs of the war. This sudden descent from the sublime to the material sobered the

members, and the debate fizzled out in a welter of childish bickering and personal recriminations.

Next day the Opposition refused to vote supplies hoping thereby to force the government to resign, and, in that astonishing way which Eastern people have of ignoring the unpleasant, seemed to forget altogether the hideous threat overhanging the country. Nothing was done. Leaders talked. Army Headquarters and the Headquarters of the Indian Air Force set their plans in operation. Steps were taken to defend the threatened cities from aerial gas attacks. All the world watched. England, alert and ready, prepared to answer the frantic appeals of her stricken erstwhile dependency for succour.

THE INDIAN FORCES, 1952.

One of the healthiest and most heart-breaking features of British military thought used to be its owlish complacency. This was not the prerogative of the Admiralty, the War Office or the Air Ministry but had been imposed upon them by the traditions of generations to such an extent that it was no wonder that some of our greatest military minds used to think themselves infallible and indispensable.* The man in the street, vocalised by the great daily press, paid his frequent tribute to the sentries in Whitehall, the be-bunted battleship off Margate, and the expensive exploits of an adventurous air force; these typified for him the greatness—nay, the incomparableness of British arms, and he was allowed to shut his eyes to the potentialities of other nations. This pretty spirit of self-conceit had been passed on to the other members of the Commonwealth of Nations and in India particularly had risen like a heady wine to the minds of her Legislators.

It is true that the twelve battalions of British infantry, the three regiments of British cavalry and the one battalion of tanks could not be called popular in political circles, but the flow of democracy with its attendant labour troubles in industrial areas had alarmed the Congress cotton and jute magnates so gravely that these influential gentlemen had been able to bully successive governments into accepting this minimum white force for internal security. On the Indian Army, therefore, all the admiration and woes of frustrated politicians were poured. Arguing on the facile basis that India's only legitimate enemies were the tribes on her frontiers whose armament and personnel

* cf. *The Lives of Marlborough*, Wellington, etc.

were still very much below Western standards, the Indian Legislatures were content to see the gradual degeneration of their army to a state comparable with the forces maintained by the old feudal aristocracies of the eighteenth century. Gradually the British Officer cadre was being eliminated and those remaining had lost faith and hope and were almost in need of charity. King's Commissioned Indian officers, educated in the traditions of the old order fought loyally to prevent disintegration, but even their best efforts were of little avail in the fight against corruption, communal interests and nepotism in high places. The Air Force had been completely Indianised except for the seven Air-Vice-M Marshals who controlled the seven frontiers. Although the machines and equipment, judged by American or Japanese standards, were out of date and in indifferent order it must be conceded that the personnel were magnificent. For the most part all pilots were Sikhs and the observers were Pathans, generally Kambar Khel Afridis or Mahsuds. *Esprit de corps* was on a high level. Crashes were frequent and were directly attributable to poor ground organisation, but the *elan* and recklessness of the flying officers were a byword throughout Asia. The Navy consisted of one 1908 cruiser, two 1913 destroyers (one without engines), six river gunboats and a training ship. Owing to economical and political reasons gunnery practice had not been carried out for six years.

Such were the fighting forces at the disposal of the Government of India to meet the invasion of six well equipped divisions and twenty air squadrons.

THE VICEROY'S COUNCIL AND ARMY HEADQUARTERS.

It is needless, perhaps, to remind the reader that India ignored the enemy ultimatum with the exception that the authorities in Delhi took all protective measure against asphyxiation. These included the concentration of the Air Force in the Delhi Province to drive off enemy air-craft and the issue of the few gas-masks available to the more senior members of government. In spite of these precautions it is common knowledge that the enemy succeeded in gassing the nerve centre of the country. The gas used was Theresene and the methods employed to paralyse the brains of the Viceroy's Council, A. H. Q., and the New Delhi Defence Force are worthy of being brought back to memory. (It might be observed fitly here that some of the following information has never before been published ; most of

the chief actors have passed away and the writer hopes that the passage of the years has healed the wounds of the old controversies which rent India so sorely until 1961, the year that Ginger Sanderson died.)

On the morning of the 25th. February, 1952, His Excellency called a Council meeting to discuss the intransigence of the Lower House on the question of supplies. Much to the amusement of their colleagues three Hon'ble Members appeared in gas-masks. On His Excellency's assurance that the Viceroy's House would receive ample warning of an impending attack the masks were laid aside and the Council settled down to business. Outside in the world-famous Moghul Garden the flowers and shrubs were a blaze of colour and the fountains were bubbling and plashing in their exquisite setting. War and the threat of war seemed distant. One mile outside the Viceregal Estate and eight feet under the ground two men were attaching portable gas cylinders to the water main which supplied the merry fountains. Nobody noticed half an hour later the change in cadence of the fountains, the hissing noise made by the nozzles or the more frequent rise and fall of the jets of water; nobody noticed the faint, sweet smell which crept in through the open windows of the Council Chamber except the Viceroy, who apologised for the strong scent of his orange trees.

The Army Member, General Sir Belvedere Sanderson, known to his intimates as "Ginger," concluded a grave statement in which he urged the announcement of a "State of Emergency," the dissolution of the House of Orators and the formation of a War Ministry. The Finance Member, rising to protest, was in the middle of a philosophical dissertation on the uses and abuses of democracy when to the horror of all the Home Member leaned across the table, placed a sheet of notepaper in front of His Excellency and asked him to play noughts and crosses! The Army Member in his indignation snorted audibly and violently, which was the cause of his immediate undoing for his lungs also became impregnated with Theresene. The others quickly succumbed to the poisonous atmosphere. Within a few minutes the Cabinet of India, in the face of the greatest crisis which had confronted them since 1919, were blissfully engaged in parlour games. It is not without significance to note, especially in the light of later events, that at the same time a similar metamorphosis had overtaken the Viceroy's staff. It gave the Military Secretary a severe shock to find

that instead of clamouring to attend the opening of a War Hospital, all the *aides de camp* were working industriously for the Staff College.

In Army Headquarters the enemy had succeeded also. Theresene had been introduced into that labyrinth of corridors and offices by the simple expedient of poisoning the thermostate air current supply. (This modern invention had been installed in 1939 when it was finally decided that the rest of India could not tolerate the idea of anybody else being comfortable during the discomfort of the hot weather. Simla had been abandoned to the monkeys. The Hill Exodus was no more. Instead, an air cooling apparatus had been set up in all government offices in New Delhi with a corresponding increase in mortality from pneumonia and kindred diseases.) On this fateful morning a Principal Staff Officers' Conference was being held attended by the Air Marshal, the Chancellor of the Chamber of Princes and the Naval Commander of the Indian Oceans. As the Chief of the General Staff was expounding his theories on the conduct of the present war a thin odour, sweetish but indefinable, stung the nostrils of the assembled officers. The first to appreciate its significance was the Quartermaster-General, a man who owed his exalted position to his uncanny "nose" for bad smells. He sprang to his feet and cried, "Gas!" Everybody sniffed anxiously but sat down again when reassured by the C. G. S. that the Intelligence Branch were in close touch with the situation and had reported that no enemy aircraft had left Peshawar or Lahore that morning. The proceedings continued and were made memorable by the offer of His Highness the Chancellor to place all the State Forces, including private aeroplanes, at the disposal of the Commander-in-Chief. The invisible gas slowly saturated the air. Then Air Marshal Sir Gilbert Sullivan electrified the meeting by bursting suddenly into the chorus of the latest musical comedy song: "I wanna thyroid baby, but that thyroid must have pep." He sat there, did the Air Marshal, with his head back and eyes shut and roared the childish ditty with the most super-charged abandon. The Master-General of the Ordnance was the next to let his subconscious mind gain control, and he, relapsing to the amusements of his subaltern days, commenced to play imaginary jazz drums with pen-holders; then fell the Adjutant-General who whistled the fascinating tune with remarkable variations and amendments assisted by His Highness who couldn't whistle. Eventually the P. S. Os.' Conference became a sing-song and terminated in a dance to which the lady typists only of A. H. Q. were invited.

Such was the potency of Theresene that nobody in A. H. Q. considered that anything extraordinary was happening, and many were the amusing (although deplorable) *contretemps* which occurred. I like the story best of the very junior G. S. O. 3 who marched into his Director's office, poured both inks over his superior's head, clapped the waste-paper basket on top and then demanded a brevet. Fortunately for all concerned the subconscious minds of junior staff officers rarely see the light of day.

THE BATTLE FRONT.

Major-General Sir Arbuthnot Gillander, M.C., M.B.E., *p. s. c.*, was in command of the Force guarding the northern frontier of the Delhi Province. His G. S. O. 1 was Colonel (Temp. Brigadier) Albert Lozenge, and his *aide de camp* was Lieutenant (local Captain) the Hon'ble Percy Smaile, Ulster Guards. The Force consisted of one Cavalry Brigade, one Artillery Brigade, two Infantry Brigades, one Mechanised experimental battalion and the usual ancillary services. The G. O. C.'s orders as issued by A. H. Q. were more of a general than explicit nature. He had to preserve intact the Delhi Province, prevent the ingress of the enemy at any point between the Jumna River, inclusive at Qalakpur, and Kutabgarh, and finally if a suitable opportunity offered he was to "crush the enemy utterly in the field." These orders were subsequently amplified in the usual way by more detailed instructions regarding the submission of daily returns and reports concerning:—

- (a) Petrol consumption and m. p. h.
- (b) The incidence of bites, frost and snake.
- (c) Damage to (1) crops, (2) buildings and (3) enemy.
- (d) The number of nonconformists requiring Holy Communion.

For the few days before battle was joined these reports served as a safety valve for the staff officers, one of whom was overheard remarking how little war was different from peace. Poor fellow, he was killed the very first day by a ricocheting mule—and the mule succumbed later to multiple pedal injuries.

Before discussing the actual operations the character and temperament of General Gillander and his staff merit our attention. In 1915 he was commissioned direct from the Harrow O. T. C. and spent the remainder of the Great War, like so many of his contemporaries,

in trenches, hospitals, canteens, staff billets, cabarets and debt. He emerged an acting Lieutenant-Colonel with a Military Cross, two mentions and a pathetic belief that the final victory was mostly due to him and the other junior infantry officers. The following years deflated him and about 1925 he suddenly realised that his knowledge of the art of war was nil. Taking a pull at himself he bought a new copy of Field Service Regulations, an Imperial Geography and a course in Writing English in Ten Easy Lessons. Within two years he was at the Staff College in Quetta. Then he performed brilliantly. Of a heavy wit, a slow but sure mind and handsome appearance he rapidly endeared himself to all, teachers and pupils alike. Thereafter he alternated staff appointments with yearly spells with his regiment and gradually during the years of peace added steadily to his rank and decorations. As a soldier one would not be harsh to call him slow in the uptake. He was one of those one-ideaed men who get hold of a *cliche* like "Depth" or "Have you watered your horses?" and for several years are content to apply depth or water as a solution of all tactical or administrative difficulties. Then, perhaps, a new D. M. T. or treatise appears from the War Office laying stress on surprise or agility or mechanised First Line Transport and after serious cogitation Sir Arbuthnot regretfully abandons his Depth and adopts a smarter piece of back-chat. I have met a lot of men like that in my time. Unfortunately at the start of this war the General was pre-occupied with Trench warfare, a new type of fighting recently discovered by some bright spark at Aldershot, and appealing with almost sentimental force to the rugged heart of the Great War veteran. That its application was specialised and extraordinary made no difference in the mind of the man who had spent those sodden years in Flanders. "By Gum," he said, his eyes sparkling as he read the Trench Warfare Pamphlet, 1950, "those perishers at the War Office have wakened up at last. This is the indubitable stuff to give the troops." And this was the spirit with which the old warrior went forth to meet the vivacious and ubiquitous mechanised advanced forces of Transoxania.

His G. S. O. 1, Albert Lozenge, was of a different calibre. The descendant of a long red line of soldiers dating from the Mutiny, with pre-natal influences of a marked militaristic character—he was born under fire, so to speak, at Pachmarhi, India—and brought up under the strictest discipline at Cheltenham, Wellington, Sandhurst, the

N. W. F. P., Camberley and Simla, he was everything that a staff officer ought to be including strictly temperate. He lived, ate, slept, drank and dreamt soldiers, F. S. R. were his Bible and T. & M. Regulations his Prayer Book. His wife did her housekeeping by numbers, and his sons and daughters spent their playtime doing T. E. W. Ts. He was one of those brilliant cavalymen who are soldiers first and horse-copers afterwards.

Of Captain Smaile little need be mentioned. He was a mere *aide de camp* and as such a pipsqueak. For his own peace of mind it was fortunate that he thought a lot of himself, for nobody else did. Having been at Eton he acted on his Harrovian master as a permanent irritant with an irritant's inevitable stimulating effect. He was beautiful and lazy and owed a vast amount of money.

The G. O. C. looked at his map, called for his dividers, an India rubber, his A. D. C. and his Intelligence Officer. "Where's the enemy?" he barked out ferociously, and Smaile peered piously into the waste-paper basket. In rapid sentences the available intelligence was unfolded; north of Lahore the dispositions and movements of enemy troops were obscure; the enemy held temporary superiority in the air; south of Lahore it was reliably reported there were six battalions of infantry in motor transport, at least three regiments of cavalry and some artillery, mechanised. Air photographs with the Ilford long distance apparatus had disclosed scattered bodies moving athwart the Grand Trunk Road on a front of twenty miles, all moving south. Whether this dispersion was a concerted approach march on the Delhi Province or whether it was imposed on the enemy (who were living on the country) by administrative necessities was not clear. Time, the great feeler, would show.

"Time the great dealer be damned," roared Sir Arbuthnot at the conclusion of the report. "Call Albert."

Brigadier Lozenge appeared with a portfolio containing his Appreciation. It consisted of thirty pages of type-written matter concluding with four alternative plans and eleven appendices. Inserting his monocle in his off-eye he proceeded to read out his Labour of Love. Gillander fidgeted impatiently, told him to cut out the rough stuff, interjected a few indigestible criticisms and showed merely a flaccid interest in the scholarly production. Smaile slept. When the four plans—all based on the main principle of concentration in an

area giving power of manoeuvre until such time as the enemy would show his hand more completely were propounded, Lozenge asked his Chief's opinion.

"Bosh," replied the General simply. "You haven't said a word about trenches. You ought to read your books, y'know."

"Trenches!" gasped Albert, and Smaile woke up thinking that wench had been adumbrated.

"Yes. Trenches. Didn't you read that thing from the War Office last month? Good stuff, that. Said that "Commanders must not overlook the fact that occasions frequently arise in war when it may be necessary to dig artificial cover for men both for protective and morale purposes." Well, then—gimme that map. The enemy have five lines of approach into my sector. The river; the net work of roads leading south from Janti Kalan; the Grand Trunk Road the railway and the Delhi Tall Distributary. Now then, if we build a system of trenches from Qalakpur—south of Janti Kalan—Narela and swinging back to Kutabgarh we will be impregnable. Like we were at Loos, old boy, in '15. What d'you think of that, Albert?"

Albert in his well-bred efforts to groan silently nearly burst his peritoneum—"B- but, Sir, you really can't be speaking seriously. Trenches for fourteen miles! We haven't the men to man them, nor the shovels to dig them, nor the engineers to site them, nor the time to do it. Sir, I assure you that your scheme—excellent as it is in many ways, Sir,—is impossible."

"Impossible!" roared Gillander. "Nothing is impossible in war. These are my orders and you, Brigadier Lozenge, will see that they are carried out. I am now going to lie down."

Lozenge turned despairingly to Smaile who was training his moustache to the position of attention. "What do you think of that, Percy?"

"Jolly good egg, Sir," replied the loyal aide-de-camp. "My old man is red-hot, isn't he?"

* * * * *

For two days the Delhi defenders dug trenches. None of the subordinate commanders, the regimental officers or men had their hearts in the work; the staff was almost mutinous and only the G. O. C. seemed care-free and happy. The news had percolated back to

A. H. Q. in New Delhi where after a hurried consultation among three senior officers, one of them decided to go forward and ascertain the truth of the devastating work. He left on the morning of the 27th. February, but fate—in the form of *Theresene Gas*—intervened before his arrival.

Just before dawn that morning when the first gentle flood-lighting of the sun was throwing its opalescent colours on the eastern canvas of the sky ; when the trees were casting their great purple shadows and the earth seemed to move uneasily in its sleep ; just before the actual sunrise three enemy air craft swooped silently down from the subaqueous vault of heaven and dropped a few candles on G. H. Q., a few more on the night-shifts of troops digging trenches—and sped away northward like fighting duck. It was a matter of moments—but what momentous moments in the destiny of a great country !

Captain Smaile, who had been arguing with his bearer regarding the accuracy of his watch, sniffed in about two pints of *Theresene*, leaped from his bed, dashed to his mirror, and, on catching a view of his leonine moustache, grabbed his nail scissors and cut it close. As he shaved he read a chapter of *F. S. R.* and found it thrilling. Dressing hurriedly but immaculately he rushed to his General's dug-out and reported for duty.

"Anything I can do for you, Sir ?" he inquired politely.

Sir Arbuthnot turned an amazed eye on his solicitous A. D. C. "Gaw, Percy," he said. "You're not sick, are you ?"

"No, Sir," said Percy indignantly. "I feel that I haven't been what I ought to have been in the past and I wish to make amends. If you don't want me at the moment, Sir, I thought I would go to the front line and dig a trench or two."

"Trenches my foot !" was the surprising answer. (Percy did not know, of course, that his General had sucked in two cubic feet of *Theresene*). "There will be no more trenches. Tell Albert-boy to toddle in as I've got a new stunt up my sleeve."

By the fortune of war Brigadier Lozenge's dug-out had collapsed during the night, thus rendering him immune from the gas-attack, and by the time the A. D. C. arrived he was emerging blasphemously from a cloud of dust. "The General's compliments, Sir, and he would like to see you at once," reported Smaile, saluting in the long-forgotten Sandhurst manner.

“What’s wrong with you, Percy? Been bitten by a *p. s. c.*?”

The G. S. O. 1 reported and was closetted with his G. O. C. for two hours. The second plan of his Appreciation was the one adopted with certain vital modifications. Briefly, the General’s new plan was to concentrate his force in the enclosed country on his left flank, leaving decoy troops in the more completed entrenchments near the river on the right and sending out his mobile forces to draw the enemy towards the right with orders to avoid entanglement.

“But you can’t risk leaving the main approach to Delhi open, Sir?” expostulated his more book-bound subordinate.

“I’ve thought of that,” chuckled the General. “Send in to New Delhi and get those four thousand coolies who are building the new Horse Show Stadium on the old Tis Hazari Maidan, and get them to block the main road there—and there—and there. That will give me all the time I want.”

“But the risk, Sir?”

“The risk be blowed, Albert. No battle has ever been won without taking risks. You fellows who have had all your soldiering on the Frontier get so security-ridden that you forget the supreme weapons of Generalship—Surprise and Mobility. Watch me, Albert.” (The reader will forgive General Gillander’s lapses into vulgar slang. The effect of Theresene.)

Every soldier dreams. Probably the most universal dream is that of being a General waging a successful battle. The dreamer imagines two evenly matched forces, his own a perfected instrument leaping to every call and ready for all emergencies; the enemy being lured into a disadvantageous position by Machiavellian guile. Then comes the dawn. The guns roar and plant their shells with uncanny accuracy, the infantry move forward like a wave, consolidate and are passed over by the following wave like the fluent surge of an incoming tide. The enemy breaks cover and the cavalry are brought on to the line with the superb judgment of a M. F. H. Throwing a joyous tongue the whole pack, horses, guns and foot, pour along pursuing, relentless, dauntless, their sterns like the wrath of God, and their hearts like incandescent flame.

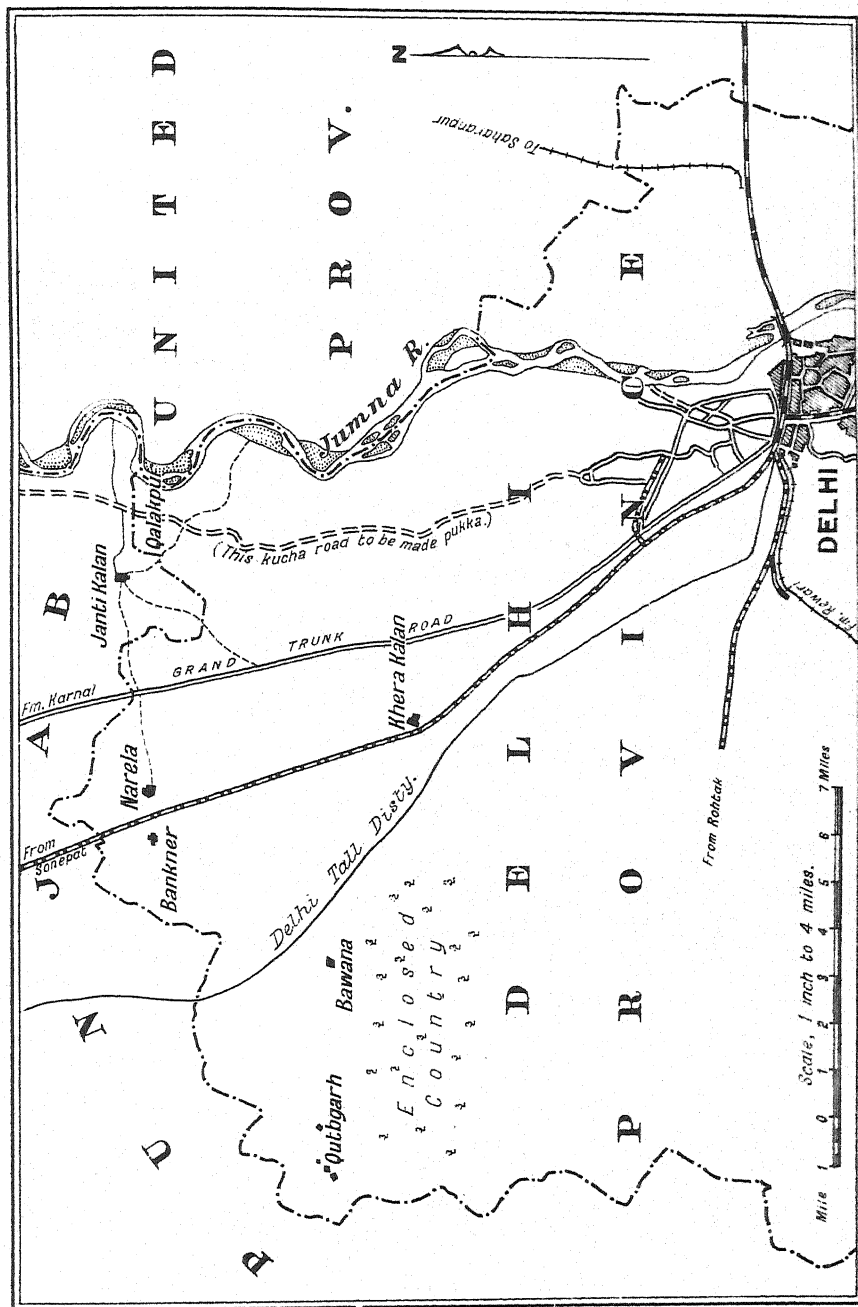
There is no harm in dreaming such romantic mixed metaphors, and if the actuality of war boils down to being invalidated from the Lines

of Communication with a septic gumboil one can only hope for a squarer deal next time.

The Battle of New Delhi made General Gillander's dreams come true. The enemy, after leaning with heavy suspicion against his right flank and finding it bogus, moved uneasily down the main road in the hope that the main body, as had been reported from the air, were digging across the road in front. Gillander swooped on their right flank, and as they conformed hastily to this danger caught them on their exposed flank with his cavalry. Desperate fighting ensued, but the issue was never in doubt and only stragglers ever reached Lahore.

This spectacular victory came at an auspicious time and rallied the country to unity. Reinforcements from England and Australia were arriving and very soon an expeditionary force under the command of Major-General Albert Lozenge was moving north through the Punjab driving back a demoralised enemy and restoring the courage of the people. Sir Arbuthnot had to go home to have his lungs looked at, and was made a Freeman of the City of London and a F. R. C. S. of Edinburgh University. Smaile lives in the city now, and works in the West End. Neither of them realises how much he owes to There-sene.

MAP OF NORTHERN FRONTIER. DELHI PROVINCE.



THE IRON DUKE VERSUS CORPORAL JOHN.

A COMPARISON AND A CONTRAST

By

MAJOR A. L. PEMBERTON, M.C., ROYAL ARTILLERY.

"I have done, according to the very best of my judgment, all that can be done. I care not either for the enemy in front, or for anything which they may say at home." (Wellington to a Spanish general, when facing Marmont, Sep. 1811.)

In three previous articles,¹ I have attempted to illustrate three definite stages in the evolution of military genius. The first stage was represented by Cromwell, a simple, primitive fighting man, who, till 1647, remained quite unconscious of his military talent. Favoured by circumstances, he rose with astonishing rapidity to the height of military and political power, but away from the battlefield his balance was uncertain, and he became the victim of religious fanaticism. In spite of all he had done to further England's greatness, his death brought about an immediate reaction; his political creations died with him, and his New Model Army and its major-generals left a heritage of hate for the redcoat that it has taken centuries to eradicate.

Stonewall Jackson, who formed the subject of the second study, differed from Cromwell only in that he became aware of his military genius at an early stage and immediately set to work to make the most of it.

Cultivating a technique of auto-suggestion that Coué could not have bettered, he rapidly overcame the deficiencies of his early education and became an acknowledged master of his profession. But, partly perhaps because success came so quickly to him, and partly because his religious scruples drove him into an early retirement at Lexington, he never attempted to extend his mastery over the arts of diplomacy and statesmanship. He remained to his death an aloof, impatient enthusiast; a great fighter, who was at his best amid the heat of battle, but without the poise and adroitness of the man of affairs.

¹ U. S. I. Journal, India, July, '29, Jan., '30, and July '31.

In Marlborough, the next on our list, we saw a man who had the conscious ambition of a Jackson and the unconscious perfection of a Cromwell. Nor did that perfection stop short at military ability ; he was a born statesman as well as a soldier, being absolutely natural and well-balanced in everything. He loved fighting but was not aggressive ; he was deeply religious but did not make a parade of his religious feelings ; he was a polished courtier but his manner was never affected ; in fact, no matter where he was, or what he was doing, self-control seemed to come naturally to him.

It was but natural, therefore, that he should be little given to introspection. He realized that he possessed great talents for war, and was willing enough to exploit these talents for the sake of himself, his country, and, above all, his beloved Sarah ; but throughout his career we can find singularly little trace of any conscious striving after perfection. His "nature was essentially simple. His thought was clear and effective, but was not of the type called profound. Indeed, he had none of the love of thinking for its own sake by which most men would hold that their best selves were revealed. He seems himself to have regarded his genius as something apart from his character." ¹ He probably felt that this genius was a divine gift, which, according to his simple faith, ought not to be made the subject of a scientific analysis.

Now, to complete our series, it would be interesting to study a man who, like Jackson, had to struggle for success, yet who ultimately attained to Marlborough's all-round greatness. And for this purpose we cannot choose a better subject than the great Duke of Wellington.

In his youth, Arthur Wellesley showed little promise of greatness or even of ordinary vitality and determination. A letter from his mother, Lady Mornington, still exists, in which, speaking of her sons, she says : "They are all, I think, endowed with excellent abilities except Arthur, and he would probably not be wanting, if only there was more of energy in his nature ; but he is so wanting in this respect, that I really do not know what to do with him." ²

¹ "John and Sarah, Duke and Duchess of Marlborough," by Stuart J. Reid, D. C. L., p. xxii.

² "Personal Reminiscences of the First Duke of Wellington," by G. R. Gleig, p. 4.

His elder brother, Richard, had at first no better opinion of him. "Little Gore! I'll tell ye a thing," he is reported to have said to a friend, "there goes my brother Arthur, the biggest ass in Europe."¹

He did, no doubt, give the impression of stupidity. He had a slow, unintelligent way of speaking, and the appearance of a dull boy. At Eton he was idle at work and at games, and he had got no higher than the Remove when his mother, for reasons of economy, took him away and placed him in a "pension" in Brussels. There he showed signs of having inherited his father's musical genius and acquired considerable skill upon the violin but exhibited no other signs of promise. So his mother, in despair, destined him for the "fool's profession" and packed him off to the French academy at Angers. Again, however, he did not shine; his health was bad, and he could take little part in the riding, fencing and other exercises which constituted the life of the place. In fact, little can be said of him at Angers except that he was "rather of a weak constitution, not very attentive to his studies, lay about a good deal on a sofa, and was constantly occupied with a little terrier called 'Vic.'"¹

His early career in the Army was scarcely more inspiring. During the first six years of his service—years spent by John Churchill on active service at Tangiers, at the naval battle of Solebay, and in Flanders and France under Turenne—he was content to serve as A. D. C. to the Lord Lieutenant of Ireland, in which post he appears to have earned a certain reputation for frivolity. "Lady Aldborough recorded that the Dublin girls would not go on a party if 'that mischievous boy' was to be one of the members, and Lord Leitrim noticed that it amused the young Wellesley to twitch out the lace neck-cloths of his friends"; while "years afterwards Lady Aldborough reminded him that she had found him such dull company driving back from some picnic that she had to turn him out of her carriage, and make him walk back to Dublin with the band."¹

Not very promising material, this, for the future victor of Waterloo and saviour of the liberties of Europe! One must not, of course, attach too much weight to these retrospective judgments of a great man's youth. No one can foretell what is going to happen to a young man in later life, and few indeed are the people who keep an objective record of the sayings and doings of their children, or of youths of their

¹ "Wellington," by Oliver Brett, pp. 3, 4, 7.

acquaintance. And afterwards, when a man has become great, there are three important factors that intervene to distort the truth and hamper the work of the investigator ; firstly, the hero worship of his friends and followers ; secondly, the envy of his political and other opponents, and of all those who resent his too evident superiority ; and thirdly, an occasional tendency on the part of the great man himself to accentuate his earlier weaknesses in order thereby to enhance the value of his achievements.

After making all allowances, however, there still remains enough evidence to show that the young Arthur Wellesley bore little apparent resemblance to the great Duke of Wellington ; and our task must now be to discover, if we can, how and when the change in his character occurred.

According to Guedalla, Lady Mornington found Arthur much improved on his return from Angers. Writing of her efforts on his behalf to two friends at Llangollen in 1787, she says : " He really is a very charming young man ; never did I see such a change for the better in anybody."¹ But, bearing in mind her efforts on his behalf, we may question whether this expression of opinion by Lady Mornington was not influenced by her desire to see her son Arthur suitably placed in the Army.

It is true that from the first his work in the Army seemed to interest him. As he said in later years : " I was not so young as not to know that since I had undertaken a profession I had better try to understand it."¹ And, as evidence of his sound practical sense, one of his earliest acts was to have a Highland private weighed in full marching order.

Nevertheless, I am inclined to believe that his real conversion began with his infatuation for Kitty Pakenham, and the disapproval with which it was viewed by her father, Lord Longford, on the score of Arthur's poverty and lack of prospects. This was just enough to arouse his pertinacity, which was afterwards to be such an outstanding feature of his character. He borrowed from Richard the purchase money for a majority in the 33rd. Regiment ; he next foreswore cards ; and finally, in the summer of 1793, he burnt his fiddle.¹

The expedition to Holland in 1795 gave him his first experience of active service and must have greatly hastened the process of his

¹ " The Duke ", by Philip Guedalla, pp. 27, 28, 36,

conversion. Indeed, in later life, when asked how he learned his profession, he replied: "I learned more by seeing our own faults, and the defects of our system in the campaign of Holland, than anywhere else. I was left there to myself with my regiment, the 33rd. on the Waal, thirty miles from headquarters, which latter were a scene of jollification, and I do not think that I was once visited by the Commander-in-Chief."¹

Yet, though his ambition was now clearly aroused, he still required to be convinced that the Army was his true, or at least his most promising, calling. The apathy displayed by the authorities during the Dutch campaign was not calculated to inspire confidence in the military machine, and Wellington, unlike Cromwell, could never regard himself as a divinely appointed reformer; the guiding motive of his life was a more practical egoism that disdained theatricalism and self-deception.

In fact, he carried his lack of sentimentality to extremes. Before Waterloo, when someone had protested against his order to the Rocket Troop to store its cherished weapons and use ordinary guns instead, and had urged that the change would break their Captain's heart, the implacable reply was, "Damn his heart, sir, let my order be obeyed."² And later, when, as a very old man, he stood one evening hesitating on the kerb-stone opposite Apsley House, and another old gentleman, after making a great show of assisting him by controlling the traffic, effusively expressed his pleasure at being able to help "the greatest man that ever lived," the Duke looked him coldly in the face, said "Don't be a damned fool!", and walked into Apsley House.³

Such a man was not likely to indulge in any false sentiment over whatever profession he might choose to adopt; and for a period, while the blunders of the Dutch campaign were still fresh in his memory, he had thoughts of devoting himself to politics, where his brother Richard seemed more likely to be of use to him. Perhaps the break would actually have been made, had it not been that a kind Fate was about to invest Richard with the Governor-Generalship of the Indian Provinces, whither Arthur's Regiment was on the point of setting sail.

Having once made up his mind, however, he acted with characteristic thoroughness. By this time he had acquired the habit of studying

¹ "Personal Reminiscences of the Duke of Wellington," by Francis, First Earl of Ellesmere, p. 161.

² "The Duke," by Philip Guedalla, p. 269.

³ "The Sword of State," by Susan Buchan, p. 228.

by himself for some hours every day, and before he sailed for India in 1796, he spent £50 on the purchase of books, in anticipation of his long exile. Most of these books were historical and dealt with India ; but the military art was represented by volumes of Saxe, Frederick, Dundas, Dumouriez, and Lloyd ; politics by Bolingbroke ; law by Blackstone ; and economics by the " *Wealth of Nations* " ; while places were also allotted to Swift, Voltaire, Rousseau, and Cr  billon. " It was," as Guedalla has observed, " a statesman's library in miniature—but all designed for use, and none to awe visitors."¹

Apart from its stabilizing influence upon his character, this habit of study was soon to bring material rewards. Lord Mornington, as Governor-General showed a very different estimation of his younger brother's ability than that which he had confided to " little Gore." " Aye ! " he could now say to Mr. Wyatt, the architect, " Arthur is a much cleverer fellow than I am, you may depend upon it."² And he gave evidence of his new found confidence in Arthur by making him his unofficial adviser on both military and political questions.

In this Fate was kind to Wellington as it had once before been kind to Marlborough. What Arabella Churchill had done for her brother Jack, Richard Wellesley was now to do for his brother Arthur, and, once started, Arthur Wellesley knew as well as anyone else how to fight his way to the top of the ladder of fame. After eight years of high responsibility, hard work, and incessant campaigning in India his judgment and knowledge had so matured that in later years he could read through his Indian despatches and say : " I understood as much of military matters then as I have ever done since."³

It is of little use, then, to trace the evolution of his greatness through all those eventful years from 1796 to 1815 ; his golden moment had come on the Waal in 1795, and it will suffice if we now take a brief glance at his personality as revealed by the historian.

In spite of his constitutional weaknesses which later reappeared in the form of an exaggerated susceptibility to colds—he was possessed, like Marlborough, Jackson and Cromwell, of the most astounding physical endurance and energy. When in pursuit of some freebooters after Argau, in Feb. 1804, he marched 60 miles between the early

¹ " *The Duke*," by Philip Guedalla, p. 63.

² " *Wellington*," by Oliver Brett, p. 13.

³ " *Conversations with the Duke of Wellington (1831-51)*," by Philip Henry, 5th Earl Stanhope, p. 130.

morning of one day and noon on the next, and then attacked with his infantry ; during the battles of the Pyrenees, in July 1813, he fairly wore out his staff as he galloped, on his English hunter, from one post to the next, in his efforts to check the powerful thrust of Soult ; and at Waterloo he offers a pretty parallel to the serene, ubiquitous Marlborough of Blenheim. He was there when the Nassauers were pressed out of Hougomont, and put in the Guards to retake the position with a brief " There, my lads, in with you—let me see no more of you." When the Life Guards charged, a deep voice was at hand to say, " Now, gentlemen, for the honour of the Household Troops." At one moment he was reforming a line of shaken infantry, within twenty yards of an oncoming French column, and as the tide of cavalry ebbed down the trampled slope, he asked the Rifles in his quiet manner to " drive those fellows away." In the dusk, as the Guard made its last charge, and the waiting line held back its fire in the Peninsular fashion, he was heard calling, " Now, Maitland ! Now's your time," and finally, he galloped off with a single officer to order the advance.¹

In temperament, he lacked the cheerful optimism of a Marlborough and the fanatical zeal of a Cromwell or a Jackson ; but he had his share of initiative and daring. No brighter example of the offensive spirit could be found than his opening manoeuvres in the battle of Assaye, or his subsequent attack at Argaum, against vastly superior numbers and after a long march on a very hot day. And nothing could beat his initiative at the passage of the Douro (May 1809) and the Bidassoa (Oct. 1813).

His coolness is, of course, proverbial. When setting out for Portugal in April 1809, his ship was caught in a violent storm, and the captain, in despair, contemplated running her ashore on the Isle of Wight. Sir Arthur, about to turn in to bed, was informed by an excited A. D. C. that the end was at hand. " In that case," he replied, with studious unconcern, " I shall not take off my boots."²

At Talavera, sitting on the hill on the British left, watching the progress of a fierce French attack upon his centre, he was approached by another excited A. D. C. sent by Albuquerque to say that the Spaniards on his right, under Cuesta, were deserting him. Without

¹ "The Duke," by Philip Guedalla, p. 275.

² "The Duke," by Philip Guedalla, p. 179.

so much as moving his head, he answered drily, "Very well, you may return to your brigade."¹

During the battle of Sorauren, while he was sleeping in an inn after an excellent dinner, some officers, alarmed at the general situation, came rushing in and insisted on waking him. "Well, sir," he said, after listening to their spokesman for some minutes, "you are certainly in a very bad position, and you must get out of it in the best way you can." He then turned over and was instantly asleep again.²

Yet, for all his calm rationalism, he never allowed reason to interfere with instinct and intuition; he knew well enough when the time for thinking was over and the time for action had come. At Salamanca, while he was in the midst of a hasty meal, a movement of the French line attracted his attention, and he asked his A. D. C., who was watching them through a glass, what they were doing. "Extending rapidly to the left," came the reply; whereupon he sprang to his feet, seized the telescope, and then, muttering that Marmont's good genius had deserted him, mounted his horse and issued the order to attack.

Again, during the battles of the Pyrenees, while riding along his very extended front, he caught sight of a French force under Clausel that seemed likely to intercept the movement of one of his own columns. Realizing the danger, he sprang from his saddle and pencilled a note on the parapet of the bridge, warning the threatened column to take another route. As he was writing, peasants crowded round him with the news that the French were entering the other end of the village. He continued to write, keeping an eye on the street, until his order was finished, and only galloped off as the leading French troops made their appearance.

Nor was it fear of responsibility that lay behind his oft-criticized caution. Even in the darkest moments of his Peninsular campaign, he never lost confidence in himself. "They may overwhelm me," he said one evening to Crocker, shortly before his departure for Portugal, "but I don't think they will outmanœuvre me. I suspect all the continental armies were more than half beaten before the battle was begun. I, at least, will not be frightened beforehand."³

¹ "Life of Duke of Wellington," by W. H. Maxwell, Vol. II, p. 7

² "Wellington," by Oliver Brett, p. 124.

³ "The Duke," by Philip Guedalla, p. 153.

And in Jan. 1810, when he was being attacked in Parliament at home, when his troops were reduced by sickness and indiscipline, when Napoleon was everywhere triumphant, and when the Spanish armies were at their last gasp, he wrote to Villiers from Viseu: "I will neither endeavour to shift from my own shoulders on those of ministers the responsibility of the failure by calling for means which I know they cannot give nor will I give to the ministers, who are not strong, and who must feel the delicacy of their own situation, an excuse for withdrawing the army."

We see here that calm steadfastness and tenacity of purpose of which mention has already been made. It was displayed in full measure at the battle of Assaye, during which two horses were killed under him and eight out of ten of his staff sustained wounds to themselves or their horses, yet in which he somehow contrived always to be at hand when most wanted, perfectly calm, cool, and collected. It shone through his administrative thoroughness when he organized and equipped the bullock train that contributed so largely to the success of the operation against Seringapatam; and when, during the winter of 1812-1813, he carried out a searching reform of the whole of the army then under his command, thus paving the way for the successes of 1813 and 1814. Again it was in evidence when, after the Commission of Adjustment appointed in 1815 had failed to settle the question of war damages, he, at the request of all concerned, undertook the job single handed, and in three months, by unremitting industry, firmness and tact, finished the settlement in a manner with which even the French ministers declared themselves satisfied.

He knew when to give way, however, and in his subsequent career as a statesman he displayed a sane opportunism that was sometimes misunderstood by his less evenly balanced political allies. Though a staunch Tory himself, he was not afraid to force Catholic Emancipation through Parliament in 1829, after he had been convinced by the Lord Lieutenant that nothing could avert civil war save a concession to the Catholic claims. And in 1832 he was again prepared to sacrifice his Tory principles and abstain from voting against the Reform Bill, after receiving the King's assurance that, if driven to it, he would create sufficient new peers to make the passage of the bill a certainty.

In military affairs he showed the same good sense and adaptability; by which he was led to a general distrust and dislike of plans.

His belief in plans was never strong. He once said pityingly of the Marshals that "they planned their campaigns just as you might make a splendid set of harness. It looks very well, and answers very well, until it gets broken; and then you are done for. Now, I made my campaigns of ropes. If anything went wrong, I tied a knot; and went on."¹

This same evenness and opportuneness of character has been diagnosed—perfectly correctly, I think—by Larpent as the cause of his apparent neglect of old friends. "I think," Larpent said, "Lord Wellington has an active, busy mind, always looking to the future, and is so used to lose a useful man, that as soon as gone he seldom thinks more of him. He would be always, no doubt, ready to serve anyone who had been about him... but he seems not to think much about you when once out of the way. He has too much of everything and everybody always in his way to think much of the absent."²

It was probably also responsible for his complete lack of vindictiveness. "When war is concluded all animosity should be forgotten" was one of his maxims; and in Jan. 1815, when mob hysteria was demanding the execution of Napoleon, he insisted that, "if the sovereigns wished to put him to death, they should appoint an executioner, which should not be me";² while the Pont de Jéna was only saved from the barbaric wrath of Blücher by the appearance of a British sentry, who was posted night and day on the bridge, with orders from the British Commander-in-Chief never for a moment to leave it.³

Finally, I suggest that it was at the back of his extraordinary ascendancy over the Portuguese and Spanish authorities. Lord Roberts has ascribed this ascendancy to his earlier experience in command of Indian troops. "They disliked him," he says, "but they feared him."⁴ And one may suspect that what they feared was the almost uncanny calmness of demeanour that somehow served only to magnify the hidden wrath within.

For Wellington was of a markedly irascible nature, and though he normally kept his temper well under control, it would flare out on occasion with devastating intensity. We are told that Abisbal, a Spanish general who had incurred his displeasure during the advance

¹ "The Duke," by Philip Guedalla, pp. 272, 253.

² "The Words of Wellington," by Edith Walford, pp. 196, 108.

³ "The Sword of State," by Susan Buchan, p. 13.

⁴ "The Rise of Wellington," by F. M. Earl Roberts, V.C., p. 120.

into France in 1814, and who subsequently visited him in Madrid, was so upset by what the Duke had to say to him that he emerged from the interview pale, nearly fainting, and clinging to the banisters for support.¹ And the sarcasm that was the more usual vehicle of displeasure seems to have been hardly less overwhelming. We can feel for the unfortunate staff officer who came to see his Chief while the latter was sitting to Goya, the painter, in Madrid, and was dismissed with these words: "I shall be glad to know who is to command the army, you or I? I establish one route; you establish another. As long as you live, sir, never do that again; never do anything without my orders."²

Wellington was, in fact, inclined to be haughty and arrogant in his dealings with his subordinates, and his low opinion of the British soldier—of everything except his fighting qualities—is too well known to need repetition. Undoubtedly, the type of man then serving in the Army was not of a very high intellectual or moral standard, but in this he was no worse than those who had followed Marlborough, and who, under the inspiration of his leadership, became reformed characters and left the Army sober and self-respecting men.

Here, then, we see the essential difference in character between these two great soldiers. Corporal John, the idol of his troops; and the Iron Duke, haughty and aloof "the little black-guard that stops the French" to a corporal in a rare outburst of enthusiasm,³ but "the Peer" to his generals, even behind his back, and "our great Lord" to ardent subalterns.⁴ The explanation seems to be that in the one mental poise came naturally and without effort, whereas in the other it was the result of fierce inward repressions. The flashing eye, the biting sarcasm, and mordant wit of the Duke of Wellington, all betray the inner tension of one whose mind is not naturally well balanced and who has to fight hard to win and maintain his self-control; a state that is still further illustrated by the severity of his discipline in his dealings both with himself and others. It has been said that once, when two men were caught plundering and brought before him, he remarked curtly, "In ten minutes report to me that these two men have been executed."⁵ And we may well ask ourselves

¹ "Personal Reminiscences of the Duke of Wellington," by Francis, First Earl of Ellesmere, p. 111.

² "Wellington," by Oliver Brett, pp. 65, 101.

³ "Wellington," by Oliver Brett, pp. 65, 101.

⁴ "The Duke," by Philip Guedalla, p. 207.

⁵ "Wellington," by Oliver Brett, p. 78.

whether this outward asperity and intolerance of weakness in others was not the mere reflection of his own harshness with himself. Indeed, one is almost forced to agree with Sir John Fortescue that Wellington "had actually an emotional nature, which he kept, owing to early training, under so stern control as to forbid it any vent except upon very rare occasions."¹

This would explain the many self-imposed standards of behaviour that earned for him the reputation for devotion to duty. What other people did, or thought, or felt, made no impression on the Duke of Wellington. "I have done," he would say, "according to the very best of my judgment, all that can be done. I care not either for the enemy in front, or for anything which they may say at home."

His standards were certainly very high, and so sensitive was he to the idea of failure that he never quite recovered from the effects of his unfortunate night attack at Sultanpettah Tope. It was the one recorded occasion on which he showed signs of being flustered, and it obviously left a very deep impression on his mind; which may possibly have accounted for his subsequent disinclination to use night operations.

The truth is, he was an abnormally sensitive man; he hated admitting himself in the wrong, and he hated being helped, but loved helping others and liked to know that this help was being appreciated. Writing to a friend in India after his appointment to the Chief Secretaryship for Ireland, he says: "I am employed in this country much in the same way that I was in India—that is to say, in everything." And from Villa Franca, in May 1811, he writes to the Earl of Liverpool, "I am obliged to be everywhere, and if absent from any operation something goes wrong."

In later life it was the same. "There is no animal in nature so worked as the Duke of Wellington" is a constantly recurring phrase in his letters to Lady Salisbury; and he would never have admitted, even to himself, that he could have avoided all his troubles by the simple expedient of withdrawing from public life. He could never have contemplated, as Marlborough did, retiring from the Army and living quietly among his horses and his dogs; he had to be helping somebody, and since—unlike Cromwell and Jackson—he had no religious mania, his help had to take a practical, worldly form.

¹ "Wellington," by Hon. John Fortescue, p. 220.

Now let us summarize the steps that seem to have occurred in the evolution of this most interesting character. We started with a delicate, shy, and sensitive child, who grew into an apparently indolent and slightly frivolous youth ; then there came an unsuccessful proposal of marriage, followed by a rapid transformation of our hero into an ambitious, industrious, and self-reliant soldier, whose health, though bad at first, flourished surprisingly amid the rigours of campaigning in Southern India ; and later, there emerged the national leader of iron will, haughty temper, cynical shrewdness, and sane opportunism ; who mellowed ultimately into the disinterested and trusted servant of the State, still irascible, still haughty, but with the selfishness gone out of his ambition, and with a very human weakness for catching colds.

There is something inspiring about a career such as this, for it seems to hold out hope to everyone. As we read of the apparently effortless perfection of a Marlborough, we are filled with admiration, but we hardly feel inspired to try and emulate his achievements. It was easy for him, because he was a born soldier and statesman ; but it would have been impossible for one who lacked his inherent ability. With Wellington, it is different ; he had a bad start in life ; he was bad at work and bad at games ; he was not even keen on soldiering when he joined the Army ; yet somehow he made good, and managed to span the enormous gap that had separated Arthur Wellesley from Jack Churchill.

It was hard work that did it ; the habit of studying by himself for some hours every day ; the same habit of mental concentration that did so much for Stonewall Jackson. But whence this habit ? Was not the price a cold and cheerless childhood and married life ?

Here again there is a marked contrast with Marlborough. In my paper on the latter, I have attempted to show how happy were his relations with women throughout his life ; and I deduced that his sweetness of temper, serenity, and sociability were the result of a state of emotional contentment.

Now with Wellington it was quite different. His mother appears to have been a cold, austere woman, who could not even remember the date of his birth ; and what little we know of his childhood is enough to show that it cannot have been happy. In his marriage, too, he was no more fortunate ; Kitty Pakenham was a sweet creature

but undecided, timid, sentimental, and not very truthful. "Mated unfortunately to a man who was irritable, punctual and business-like, she was continually found wanting. She lacked all the qualities which her husband really admired in a human being." ¹

Thus Arthur Wellesley was never able to get away from himself and establish an emotional contact with the outside world. The seclusiveness engendered in him by his early frailty and unhappiness was confirmed by the failure of his marital relations. And as he could not be happy, he had to be great, for his sensitiveness was such that he could not bear to be pitied, even by himself. His greatness was, in fact, a compensation for his emotional failures, and, like all such compensations, it was overdone. The mental concentration, practised at first as a few hours isolated study every day, became at last the tyrant of his life ; like some mental Sandow, his very existence depended on the exercises that he had once cultivated as an aid to health ; he could not retire gracefully from the arena of public life, but fought on, an object of mingled awe and pity, till death at last released him from the struggle.

¹ "The Sword of State," by Susan Buchan, p. 32.

IMPRESSIONS OF COLLECTIVE TRAINING, ALDERSHOT, 1932.

By MAJOR A. B. GIBSON, M.C., 13TH FRONTIER FORCE RIFLES.

The following notes make no pretence to being a survey of the work done in the Aldershot Command last summer. They are merely the random jottings of a spectator from India, who was attached to the 2nd. Division. They are written mainly from the standpoint of the 6th. Infantry Brigade.

To the Commanders and Staffs of the 2nd. Division and of the 6th. Infantry Brigade, as well as to all officers with whom he came in contact, the writer tenders his warmest thanks. Nothing could have exceeded the kindness shown to him by everyone in Aldershot.

Effectives.

Shortage of men appears to be the greatest weakness of training at Aldershot, as at all home stations. To the Indian spectator, accustomed to full peace establishments, units were often scarcely recognisable. Battalions looked like companies; batteries often produced only the men and armament of a section. The number of officers on the other hand seemed enormous. In one exercise a battalion at war establishment was improvised. To effect this, practically the whole resources of an infantry brigade in men, and more than its resources in animals and vehicles were called on.

To the young officer, and not so very young either in 1932, who has never seen a real battalion, much less a brigade or division, this shortage must to some extent produce false lessons. To the staff officer it makes for a simplification of his problems by reducing the factors of time and space. This simplification affects more especially the complicated staff duties inevitable in dealing with mechanized, or worse still semi-mechanized, forces. Watching the concentration and extrication of such forces one could not help thinking how vastly more difficult these already complicated operations would be if the forces concerned were not virtually skeletons.

Infantry Organization.

The equipment of the infantry of the Aldershot Command is normal, except that of the 6th. Infantry Brigade. This brigade is partially mechanized, but not to the extent carried out in the 7th.

Brigade. The battalion organization follows closely that laid down in the latest official publication on the subject of mechanization and appears to be an almost unqualified success. In particular the new mortar receives a volume of praise on all hands. Considerable practical experience has been gained in the handling of anti-tank guns. It has emerged from this practice that employment of these guns on a battalion basis is often uneconomical, and that higher co-ordination is necessary to obtain the best lay-out. To achieve this the 6th. Brigade have appointed a Brigade Anti-Tank Officer, whose duties are in part analogous to those of the Brigade Machine Gun Officer—co-ordination of guns which are under battalion control. On occasions however all anti-tank guns were brigaded and their layout and control then became the task of the "B.A.T.O." An instance of this form of employment was when anti-tank platoons formed piquets or part of piquets for flank protection of the moving brigade. Incidentally, a controversy was in progress on the subject of the necessity of B. M. G. O. Meantime brigades retain them, but in the collective training season they have little or no work to do with the machine guns of their brigades; they have, however, full time jobs as assistants to their brigade majors.

6th. Brigade Headquarters have a Morris 6-wheeler staff car, and work frequently with a lorry office. Both of these are of immense assistance to the Commander in enabling him to retain control of his brigade when it is widely deployed. Throughout the brigade Austin Sevens abound, and are constantly used for reconnaissance and liaison.

The 6th. Brigade forms the nucleus of the mechanized "school of thought" at Aldershot. With it are associated continually the mechanized gunners—the 10th. Field Brigade,—a mechanized Field Company, and a mechanized Signal Section. Affiliation between units goes strong, everyone knows everyone else, and there is a tremendous "*esprit de groupe*" throughout. This mutual understanding is an absolute necessity in a formation of such a heterogenous nature, where staff duties are unusually difficult. Orders, often quite unavoidably, become long and complicated, and the simple march table for the concentration of an unmechanized brigade becomes a most formidable document. Not only is special training required for the production of these orders, but a considerable degree of intelligent initiative is called for in their recipients if they are to be successfully carried out.

Mechanization and Mentality.

There seemed to the spectator no doubt at all of the effect of mechanization on the officers and men of the infantry concerned. Quite apart from the useful trade which the man in the ranks learns as part of his normal soldiering, service in a mechanized unit is definitely much more "fun" than that in a non-mechanized one. Driving a Carden-Loyd through the dripping woods of Surrey is certainly hard work, but it is infinitely more amusing than plodding through them heavy footed and enveloped in a sweating ground sheet. The whole mechanized show goes with a snap, and one got the impression that this increase of pace was definitely reflected in the mentality of the men concerned. Battalions coming into mechanized brigades take to the work extraordinarily quickly. The anti-climax of leaving them to return to the old ways must be hard to bear.

Communications.

Rapid communications between the parts of a mechanized force are an essential for successful action. The 6th. Brigade was particularly well served in this respect. Wide and complicated movements requiring the most careful co-ordination were carried out time after time smoothly and successfully thanks to the rapidity and efficiency of the intercommunication. Virtually two agencies alone were responsible for this state of affairs.

(a) *Service of Liaison.*—The principle of liaison appeared to have been thoroughly instilled into everyone. No one ever waited in ignorance of the situation, or of the position of the troops on his flanks, front, or rear. Liaison agents were everywhere. Officers working between units and Headquarters and units dashed about in Austin Sevens or on motor cycles. They were by no means always the most junior and inexperienced officers, as seems so often to be the case in India. Admittedly of course, there are far more officers to play with in England, but even in cases where young officers were employed on liaison work, the manner in which they made their reports was evidence of considerable training in this most important duty.

(b) *Wireless.*—The 6th. Brigade was liberally equipped with the new No. 1 Sets which are combined R/T and W/T.

These were mounted in Austin Sevens and accompanied battalions sent off on detached missions. They appeared to be very satisfactory and through them almost uninterrupted communication was maintained.

Scope of the Training in 1932.

In 1932 Collective Training at Aldershot was limited for reasons of economy to exercises carried out from barracks. These exercises usually lasted for several days but were conducted over ground very familiar to the troops. As a result personal reconnaissances were largely unnecessary, and at times even the map was hardly consulted. In spite of these drawbacks the training was neither stereotyped nor dull, the schemes being in some cases most unusually ingenious and live.

Tanks took no part in exercises with other arms; in 1932 they were playing by themselves.

Direction and Umpiring.

Having set the schemes the Directing Staff interfered very little in the course of the operations, which were allowed to develop to their logical conclusions. Good plans were not penalised, and were allowed to achieve the success they deserved. Action by the Directing Staff was often confined to suspending operations when one side had definitely succeeded in attaining its object. This unhampering direction gave opportunities for real training in leadership, and kept the exercises live and interesting.

Umpiring was most efficient. The umpires themselves knew their business, and there were plenty of them everywhere. The system was simple and practical; there was no elaborate "neutral signal service" nor system of reports to hamper umpires and to take them away from their proper place in the operations—between the opposing forces, and in touch with their opposite numbers. In most cases umpires used their private cars as transport.

Controlled by good direction and umpiring, the operations were most realistic. Prisoners were always taken, and were treated when captured in a thoroughly business like fashion. In India we rarely take prisoners, and when we do we hand them back at dark for fear they go hungry. The taking of prisoners apart from other considerations is most stimulating to the troops, and we would probably gain

much if we always took prisoners, and kept them to the end of the operations. If they went hungry it would teach them not to be captured again.

The Will to Win.

The outstanding impression produced on the spectators of the Aldershot training was the spirit in which the whole business was undertaken. Some things were noticeably better done than in India, especially co-operation with the R. A. F., anti-aircraft training, and traffic control. Other things were not so good—notably the training of the troops themselves.

The spirit of everyone was however quite remarkable. The success of the whole training was really made by the will to win with which everyone seemed imbued. Plans were made not to conform to academic ritual and formulæ, but with the object of defeating the enemy. Inter-brigade rivalry was intense. The results of each battle were canvassed with the greatest keenness. Interest culminated in the last exercise, a fight between the 2nd. and 6th. Brigades. This is an annual fixture, and is regarded very much in the light of a major sporting event. In the course of this battle the Commander of the 2nd. Brigade was captured. The officer who effected this coup was quite incoherent with excitement, and the news was received with wild enthusiasm by everyone in the 6th. Brigade.

In India we have certain handicaps to live and amusing training. In monotonous country devoid of interest or even of features, it is difficult to stage stimulating exercises. Much has lately been written in our official training memoranda about this will to win, which often in the past has been sadly lacking in our training. Matters have certainly been improved of late, but further development is certainly possible. Our schemes for two-sided exercises with troops must be framed and controlled to give full scope to this factor. Too often in the past over-control has made success impossible to achieve. In every exercise large or small the defeat of the enemy, or at least the attainment of the object should be a possibility. The will to win will then develop naturally in commanders and in their troops. It should be the basis of all training. Without it the best exercise must be boring; with it even a dull scheme is enlivened.

THE TRAVELS OF RISALDAR SHAHZAD MIR KHAN.

PART III.

MY JOURNEY TO AFRICA WITH CAPTAIN WELLBY SAHIB BAHADUR

IN 1898-99.

In 1898, when I was in Jhelum, I received a letter from Captain Wellby Sahib through the Q. M. G.'s office in Simla, asking whether I would like to go to Africa with him. At first I was not keen on the idea of spending my whole life travelling and so being passed over for promotion in the Regiment; but the Colonel Sahib eventually persuaded me to go.

I met Captain Wellby Sahib in Bombay and we sailed on the 30th August arriving at Aden on the 7th. September. After a few days there we sailed for Zula, a port in Somaliland near the northern boundaries of Abyssinia where we met Harrington Sahib who was on his way to the capital.

Zula, Bulghar, Berbera and Aden are all prototypes of Hell, for there is not a blade of grass or a green leaf to be seen in any of them. Water is so scarce that one can only get it on payment.

The Somalis are divided into twelve tribes and own large flocks and herds. They are shameless beggars and will ask for *bakhshish* for merely telling you where the road goes to. They are terribly conceited and think that they are the most beautiful, the bravest and cleverest people in the world. From my experience of them, I am of opinion that they are first class hunters, that is, in tracking and marking down game. They have wonderful eye-sight, are congenial companions and can endure thirst second to none. For the rest they are repulsively ugly. Their food consists of milk and the meat of the camel only.

The only Somali tribe of any importance is the Isa. In this tribe, a young man is not allowed to marry till he has killed one or two men—for before he has accomplished this, they say he is no man and he has to eat his food with the women. They kill their men treacherously and usually in the following manner. The young man meets some unfortunate on the road or may be is walking alongside someone. He will eventually suggest that they should rest for a while in the shade. When his victim is asleep he will stab him with his spear.

At the wedding, the groom will hang an iron plaque round his bride's neck, and the size of the plaque will depend on the number of men he has murdered and it is looked on as a sort of medal for bravery! When he dies they will erect as many grave stones over his grave as the number of men he has killed. The Somalis in general marry only one wife and when she has had three or four children, her husband gets rid of her, sends her back to her people, and marries a new one. They say this improves the breed !

The Somalis as a nation are of no account, for they have never fought a war, and are essentially cowardly and therefore peace-loving. However they have a Mulla, Muhammad Abdulla by name, whom I saw in Berbera when he was on his way to the Pilgrimage to Mecca. He indeed had had sufficient spirit to raise an insurrection in the land, for after he had induced half the people to accept him as their leader, he attacked and plundered the other half and even gave the British Government a good deal of trouble.

Captain Wellby Sahib Bahadur and I left Berbera on the 13th. September and reached Hargisa, a distance of some eighty-eight miles, on the 19th. We stayed there till the 30th. and then marched the remaining seventy-seven miles to the frontier of Abyssinia within a mile of which we were met by an Abyssinian General called Abdulla Lihaha, who refused to let us go any further till he had permission from his Commander-in-Chief, Ras Makinnan. We were delayed for a week till the necessary permission came.

The Abyssinians and their King.

We arrived at the capital, Addis Ababa or Antoto, on the 25th. October and on the 26th. the Sahib told me that on the following day I was to take four sowars of the Aden Troop as escort, and that we would pay our respects to King Menelik. This we did, but when the king saw the sowars with drawn swords he appeared uneasy. Harrington Sahib noticed this and told me to withdraw the escort.

The various districts in Abyssinia are governed by military Governors appointed by the King. Such Governors are styled *Ras*, e.g., Ras Makinnan who administers the country from Jagjaga (?) to the Eastern frontier. Such military Governors appoint Generals and Colonels to assist them in the administration. Once a year they offer a present to the king which consists of money, elephant tusks, young girls or anything else worth having. The king rewards them with

some small gift. That is the king's chief source of revenue and with this money he buys rifles from France and Russia which he distributes among the various Ras. In former days the tribes were only armed with bows, arrows and spears but now, thanks to these rifles, they have been able to take over the vast territory which comprises the Abyssinia of to-day.

The Abyssinians appear to be a very brave and warlike people. But in my three visits to their country, I have had a good opportunity of studying them and have come to the conclusion that they are chicken-hearted and are even afraid to leave their own country.

Some of their customs are really disgusting. For instance, they slaughter an ox, a sheep or a goat in the following manner. One of them fells the animal by a single blow on the head with a large hammer and then plunges a dagger into its intestines and so causes a stream of blood to gush out. If the onlookers happen to have a vessel with them, they will let the blood flow into it and drink it, otherwise they will merely suck up the blood off the ground. They will then cut off large portions of the flesh and seize one end of a piece of the meat with their teeth and the other end with their hands and tear and eat it just like wolves. I often asked them why they did this and they would reply that there was no nourishment in cooked meat and that raw meat made them strong.

They will boast of their bravery and prowess by saying that they have killed a lion, an elephant, or some other wild animal. The method they employ to kill these animals is as follows. Not less than fifty will go after a lion and not less than sixty after an elephant or rhinoceros. The animal belongs to the man who first lets off his rifle at it whether he hits it or not. They have no idea whatsoever of how to use a rifle and turn their faces over to the right when they pull the triggers, so it is impossible to tell when the bullet will go. Nevertheless, when fifty or sixty rifles are let off, it is probable that one bullet will hit the mark. If the animal is killed, that very night a great crowd will collect in the house of the man who fired the first shot, and they will sing and make merry and drink themselves drunk.

We stayed in Addis Ababa till the 29th. and on the following day the king prepared to go to war with a neighbouring state. An army of 60,000 went out to battle and we also went in the King's train. On the second day, a messenger arrived from the Queen-Empress who

implored the king to make peace and return. This His Majesty decided to do. To mark the termination of the operations, a salute of eleven guns was fired.

Notes on the Abyssinian Army.

The troops have no barracks or lines and all live in the bazaars. The men always go about armed with rifles and swords. These swords, which are curved like bows, they wear on their right sides. No musketry whatsoever is carried out in the army. When a soldier takes an oath, he does not swear by the name of God or of any Saint, but by name of the Commander-in-Chief, Ras Makinnan, which is considered absolutely binding.

Menelik's forces had been trained by a German officer and when I saw them marching out to attack Tigri (the State mentioned above), I noticed that, just like an European Army, they had scouts out in front of the advanced guard and patrols on both flanks. When halted at night, they took all necessary precautions for protection, not by outposts but by the same guards as they used by day. Tents were carried for the whole force.

There were about a thousand women with the force, some of whom were the General's wives. These carried umbrellas of various colours. The remainder consisted of nine hundred concubines who were a great encumbrance on the road. A Lance-Naik was allowed one woman to look after him and a Jemadar, two or three. The supply of women in Abyssinia is an easy matter for they are all prostitutes.

Instead of an Arsenal, they have a reserve of arms and munitions at the capital which they captured some years ago from an Italian force which had invaded their country. The Italian General was utterly incompetent and had made no arrangements for the protection of his supply column. The men suffered agonies of thirst and eventually the whole force was surrounded by Ras Makinnan's troops and some 6,000 European troops with their artillery, arms and horses were captured.

The Foreign Consulates.

The French were the first nation to have a consulate in Addis Ababa and that was because they hoped to take the country over. They were soon followed by the Italians and the Russians. Last of all the British appointed a consul and I had the honour of hoisting his flag ;

that is to say I was the first man to hoist the Union Jack in front of the British Agency in Addis Ababa and Captain Wellby Sahib took a photograph of me doing so.

We continue the Journey.

On the 31st. October, Captain Wellby Sahib received permission to continue his journey, and having made all necessary arrangements and collected fifty-five followers under an Abyssinian headman we marched to Mount Zukala.

The hinterland of Abyssinia is very fertile during the rainy season—indeed it must be one of the most fertile countries in the world. Owing to the fact that it rains for five months on end, pools of water are usually to be found even on the tops of the hills. The natives cultivate maize, wheat and barley, but know nothing of other crops, although their country is admirably suited for rice and tobacco. They sow millet in large quantities out of which they make a sort of bread.

Our way now lay through really wild country. On such a journey one has to take the greatest precautions. One must always have a rifle, a knife, the means of lighting a fire and a water bottle with one, and remember that in this part of the world if you have a double barrel gun and some cartridges you will never go hungry. If you are travelling alone, keep off the paths as far as possible, for lions and savages often frequent the paths.

Nearly all our transport animals died on the road and Captain Wellby despaired of our being able to continue the journey. I thereupon took fifteen coolies with me and went off to the southern shores of Lake Rudolf, which is 300 miles long from North to South.

On the way we came to a forest in which we found some shepherds with their flocks, and later we came to know that they had some donkeys too. They were in front of us and when we approached them I shot a stag. As soon as they heard the shot, they prepared to fight. There were many of them, and to frighten them I fired several more shots in the air. As soon as they heard the shots, they left their sheep, goats and donkeys and fled. Sixty big fat donkeys thus fell into our hands which were more than sufficient for our needs. We also rounded up four hundred sheep. The shepherds tried to attack us that night but could not get near our camp. By way of payment for the donkeys, sheep and goats, the Sahib left on the ground some bales of cloth and bundles of beads.

In this land there is an extraordinary animal called the "Shutar-murgh" (Ostrich), the feathers of which the English consider very valuable. It is an enormous bird though it cannot fly. Then there is the Giraffe which looks like a deformed camel. It can eat the leaves off the top of even very large trees. Besides this, there are large stags called *Kudu*, lions, wild donkeys and many rare kinds of deer. It is a sportsman's paradise.

Another feature of the country is that whereas the water of any great lake is brackish, that of Lake Rudolf is sweet. In this lake, hippopotami are to be found, from the teeth of which good false teeth are made for human beings. There are great big crocodiles and shoals of fish. On this journey I shot an elephant, and a rhinoceros which took six Martini-Henry bullets to bring down, whereas a single bullet in the head from a Lee-Metford will stop either animal.

When we left Lake Rudolf, we were entirely dependent on rain for our water supply. For many days on end we had not had a drop of rain and Captain Wellby Sahib sent me out with nine coolies to reconnoitre for water. We marched all night long and at dawn saw a woman of the savages and asked her by signs where we could get water. She led us to a stream where we saw some camels which we were badly in need of for transport. The Sahib had told me that if ever I commandeered any transport animals, I was to bring the owners up as well, and that he would give them cloth and coral beads. As soon as they saw us the men ran away, but three women remained and these I took along together with seven camels and I sent two men to bring the Sahib.

The savages did not seem to mind very much about the camels but they were extremely annoyed at their women being taken, and that night crowds of them surrounded us and I had to sit up all night with my seven men. We fired our rifles till dawn when the Sahib arrived and gave the owners of the camels cloth and coral beads, and let the women go. When the savages saw their women returning with the camels and these gifts they were delighted, and one of them actually drove his camel with us.

After a time our supplies of food came to an end, and for many days we had seen nothing to shoot, so the Sahib again sent me out with two coolies to reconnoitre and to try to shoot something for food. We soon met a couple of savages to whom we explained by signs that

we wanted food. They took us to their village and offered us some millet. They then came back carrying the millet to our camp. I noticed that they seemed surprised that we were so few and that most of our followers were ill. They examined our rifles with curiosity and apparently did not realise that they were weapons. They returned home and that very night some three hundred of them surrounded our camp. Led by two of their chiefs, a party of them came forward and the Sahib and I pointed our rifles point blank at the stomachs of the two chiefs and told them that unless they sent their people away we would kill them. They signalled to their followers to retire. Next morning these two men came to pay their respects to the Sahib, but as soon as we started off, their warriors followed stealthily on our flanks with the obvious intention of murdering us at the first opportunity. I suggested to the Sahib that we should halt and make a zariba of thorn bushes round our camp. This we did and after a while we saw some sixty of them coming up from the rear preparing to attack. The Sahib knelt down and fired two shots at them and I had one shot at them standing. These three rounds were quite enough for they retired. Some of them must have been hit and the others probably realised for the first time what a rifle could do !

Some days after this we came to a river which was a branch of the Nile. This river was infested with crocodiles so we could not swim across. We had several of our donkeys taken by these animals. We met with the same difficulty at every branch of the Nile we had to cross. We overcame this difficulty by means of a canvas boat which we had brought with us. This now proved invaluable. It would hold four men and a lot of kit.

We made two long ropes out of the bundles of cloth we had brought for the savages and fastened iron rings to the necks of the transport animals which we managed to pull across with the ropes, whilst the men in the boat shoved the crocodiles off.

The people in this part of the world live on fish for they know nothing about cultivation. Neither men nor women wear any clothes. They do not appear to be shy about it, but it makes a foreigner blush !

After marching through dense forests, deserts and swamps for about a year, one day as we were following the bank of the river Nomer (?) we were astonished to see in front of us a camp of considerable size, and that the people of the camp had trained two field guns

on us! We studied them through our field glasses and found that they were a detachment of the Egyptian Army. When we reached the camp we came to know that there were two companies under a Bimbashi called Mackenzie Sahib. They were encamped at the junction of the Nile and Nomer Rivers.

We crossed the Nile and reached Fashoda on the 8th. July 1899. In Fashoda there were two officers, one an Englishman, and the other a Turk. Each of these was trying to enlist the sympathy of the local tribes against the other, for after the campaign against the Dervishes it had been decided that both nations, *i.e.*, the British and the Turkish-Egyptians should have an equal share in the administration of the country and when we were there each of them was trying to get the greater share.

We stayed in Fashoda for a month and then sailed up the Nile in a ship called the "Sultani." In Omdurman, there were about 15,000 Sudanese and Egyptian troops. I saw them on parade. All words of command, etc., were in Turkish.

The Egyptians are fat, lazy and insolent. Their women too are very fat and go about enshrouded in black veils, though they are not very careful about keeping in purdah. The men-folk wear European dress, and although the climate is excellent they do not look healthy as, like the French, they are too fat.

The River Nile.

The whole country is irrigated by the Nile and is very fertile. This river flows so slowly that it takes one some time to realise that it flows northwards. For this reason it is navigable for all kinds of shipping. It is wrong to call the river "The Nile" which means the "blue" for it ought to be called like the "Hoang Ho" of China "The Golden River." The banks on both sides are so fertile that the land might be called "Nature's Throne." Every year the floods irrigate it and make it one of the world's granaries. Portions of a railway have been constructed along the banks of the river from Khartoum northwards, but they have not been linked up as yet. The banks of the river itself are covered with date gardens.

Cairo.

There are no buildings of any great age in Cairo, but there is a shrine in which the head of Imam Husain is said to be kept. The

city is well built—all the houses are of brick. I stayed in the “Egypt Barracks.” One day Lord Kitchener Sahib came there and I was introduced to him. He was very nice to me and complimentary on the work I had done. We stayed in Cairo for eight days and then went by train to Suez, a twenty-four hours journey. On the following day, Captain Wellby Sahib sailed for England, and it took me eight days to settle up with the servants, etc., and I then returned to Aden.

(To be continued).

MAINTENANCE OF A CAVALRY BRIGADE WITH MECHANISED TRANSPORT.

BY CAPTAIN G. S. R. WEBB, M.C., 15TH. LANCERS.

The decision to mechanise the transport of Cavalry Brigades on the Indian Establishment has roused a certain amount of controversy. There are many who consider that the A. T. Cart, slow and cumbersome as it is, is more reliable in roadless Asia. The difficulties of the Mechanical Transport at the crossing of the Bimber Nullah during the Northern Command manœuvres of 1928 are quoted as an outstanding example. Advocates of the new system argue that the 30-cwt. six-wheeler lorry can go almost anywhere that the A. T. Cart can go, its mobility more than compensating for any small delays that may occur in getting it over bad places. They further insist that delays due to rain would normally be limited to a few days anywhere in Northern India or beyond the Frontier and would affect both sides, while the Indian Army would be ill-equipped with A. T. Carts to meet an opposing force which had the advantage of M. T.

Whatever the arguments, the fact remains that the decision has been taken and it is desirable to examine the problems that will arise with the new form of transport. The increased mobility and range of action now given to the Cavalry Brigade are to some extent offset by the separation of man and horse from essential equipment, by increased distances between the Brigade and its transport, and by the fact that men on their feet such as followers, will be useless under the new organisation.

A few notes on the present system of maintenance in India compared with the Home system, will help us to get a mental picture of what is going on behind the Cavalry Brigade itself.

At Home.

1st. Line Transport belongs entirely to the unit.

2nd. Line Transport organised as sections of the Cavalry Divisional Baggage, Supply and Ammunition Companies R. A. S. C.

3rd. Line Transport consists of Cavalry Maintenance M. T. Companies which work between Railhead and S. R. P. or A. R. P.

In India.

1st. Line Transport consists (in Cavalry Brigades only) of unit transport, some of which is held in peace and some allotted from the I.A.S.C., on mobilisation. A portion of the weight previously carried on the horse is now carried in "A" and "B" Echelons, 2nd. Line Transport.

2nd. Line Transport. "A" Echelon.—This comprises 22 30-cwt. lorries attached to units and carrying reserves of water, ammunition and other essentials required close at hand.

"B" Echelon is arranged in Baggage, Supply and Ammunition Sections together with certain technical I.A.S.C. lorries.

The whole of the 2nd. Line Transport is organised as a Cavalry Brigade M. T. Company.

3rd. Line Transport consists of standard M. T. Sections up to the number required and working under the orders of the superior commander (*i.e.*, rearward of S. R. P. and A. R. P.).

It will be found that all transport in the Brigade is now Pack or M. T. except that of the Battery R.H.A.

The Cavalry Brigade, I. A. S. C., is organised as follows:—

C. I. A. S. C.—A Major I. A. S. C. who is responsible for all supply and transport arrangements within the Brigade.

M. T. Company, I. A. S. C., consisting of Headquarters and four Sections of 30-cwt. lorries. Headquarters includes workshops, petrol tank lorry and other technical vehicles.

The four Sections provide lifts as under:—

22 "A" Echelon vehicles.

31 Baggage Section vehicles.

12 Ammunition Section vehicles.

24 Supply Section vehicles.

10 per cent. spare lorries for use in case of breakdown or to replace casualties.

The balance of the Sections (which each consist of 25 working vehicles) will probably be retained as an Army reserve and will not be available for use within the Brigade.

The Ammunition Section.

The Cavalry Brigade Ammunition Column is abolished but the Battery R. H. A. retains a horsed Ammunition Section. 168 rounds per gun are now carried by the Battery and 84 rounds per gun in the Ammunition Section.

Cavalry Regiments carry their normal echelon of ammunition reserve on pack horses; regimental reserves for Vickers guns and rifles being carried in "A" Echelon M. T.

The Ammunition Section of "B" Echelon 2nd. Line M. T. carries 140 rounds per 13-pdr., 17,000 rounds per Vickers gun and 150 rounds per rifle. This Section will usually work well ahead of the rest of the M. T. Company and under the direct orders of Brigade Headquarters. When an engagement is imminent a portion of the Section will usually be ordered to form a Forward Ammunition Point (F. A. P.) in order to give units a definite fixed point from which they can draw supplies of the various natures. The location of the F. A. P. will be notified in the orders for the operation. It will be the duty of the O. C. Ammunition Section to maintain a forward impetus of supply to the Battery Ammunition Section, "A" Echelon Ammunition reserves, or direct to units, by keeping in close touch with them and sending up lorries as required. It will be an advantage to load all S. A. A. lorries on a standard basis, *i.e.*, a proportion of charger packed, bundle packed and fireworks in each so that a mere demand for S. A. A. will ensure the correct type being sent up. All the S. A. A. lorries will form a pool, any one being available to go to any unit. A Regiment on detached duty might, however, take its Ammunition lorries with it. The function of the Section does not, however, end here. The remainder of the lorries will be required to fetch refills from the A. R. P. and to replace empty lorries at the F. A. P. At present there is only one motor cycle with this Section but it is proposed to increase the number; failing this it may be necessary for units to send back for S. A. A. lorries owing to the lack of means of communication.

During operations it will be usual to refill unit packs direct from this Section instead of *via* the "A" Echelon lorries so as to save double handling. The latter Echelon will supply deficiencies in bandoliers, etc., when in bivouac.

The Supply Section.

The system of supply is normal. The Supply Section, working under order of the C. I. A. S. C. will collect from S. R. P. where bulk is broken by the Supply Issue Section and deliver thence to units *via* Meeting Points. The question of its control will be discussed later. Bakery Sections do not now form a part of the Brigade but will be located at or near railhead, sending up their bread by the Supply

Column. Butchery Sections are under the C. I. A. S. C. of the Brigade and may be located near the S. R. P. where bulk is broken. Stores are sent up in Supply lorries. If they are too bulky, special transport will have to be detailed.

The Baggage Section.

This contains all unit loads not required immediately, and units may have to be prepared to do without them for one or more nights. The Section will collect baggage from unit bivouacs in the morning and rendezvous at a point selected by the Staff until it can be moved up. The lorries will normally return to the parent unit (M. T. Company) at night for maintenance.

M. T. Company Headquarters.

This includes one breakdown lorry, a petrol tank lorry and, normally, the workshop and store lorries of each section which will form a Company workshop and be able to deal with all 2nd. line repairs—those which can be completed within six days. It will also be able to despatch a breakdown or local repair detachment to any point where its assistance is required. The Mobile Repair Unit allotted in War Establishments 1929, does not now form part of the Cavalry Brigade.

3rd. line repairs, *i.e.*, those taking more than six days, will be evacuated in the normal manner, replacements being demanded. It will be seen from the above that the Company workshop should not normally be moved daily with the Brigade owing to the difficulty in moving vehicles under repair and the loss of working time. A portion of the workshop could however go forward and open up an advanced workshop, the remainder closing up as soon as they had finished the repairs on hand.

The petrol tank lorry is for the supply of the M. T. Company and not for the M. T. of the whole Brigade. The latter is supplied by the Supply Columns, the fuel being in tins decanted from bulk as far forward as possible. All lorries can carry petrol in their tanks for two days supply on a normal radius of 25 miles, *i.e.*, 50 miles per day. Refilling can therefore be suspended for one day in emergency, but the second day's supply in the tank should be regarded as an iron ration and the tank maintained full whenever possible.

Each Section has approximately 50 per cent. of spare drivers.

Engineers.

The Field Troop, Sappers and Miners, has 10 lorries, all 1st. line transport, as its M. T. Echelon. The other half troop is organised as a horsed unit with pack transport. These loads are interchangeable with those in the M. T. The Troop will, therefore, usually move in two Echelons.

Water Supply.—Every unit has one or more water trailers, except the I.A.S.C., who utilise mule pakhsals carried in each Section. This will considerably reduce the work to be done each evening by the Sappers and R.A.M.C. as one central water point can be made from which all trailers can draw drinking water.

Medical.

The Cavalry Brigade Field Ambulance is entirely mechanised and all its transport is 1st. line. It therefore moves as a compact unit. It can open an A. D. S. or M. D. S., act as a field hospital, or divide into two echelons, half remaining to collect and dispose of casualties while the remainder goes forward with the advancing Brigade. It may be well to mention here that any 30-cwt. lorry can be rapidly converted into an ambulance, the necessary fittings being carried on each lorry in war to sling four stretchers; the latter, of course, are not provided.

Other Units.

Other units with M. T. include the Signal Troop with one wireless lorry which will usually move with Brigade Headquarters M. T.

The Mobile Veterinary Section has three lorries (no horsed transport) which will move as a unit in the M. T. Column.

The Provost and Traffic Troop is organised as a Headquarters, with one British Section mounted on motor cycles and cycles and two Indian Sections mounted on horses. One light van forms its 1st. line transport to convey dismounted personnel from point to point.

Although none is yet provided, it is considered that an office lorry should be provided for Brigade Headquarters. The complications of a modern major engagement are such that duplication of orders is nearly always necessary and there is seldom time to dismount the necessary equipment.

Thus we get a picture of numerous echelons of M. T. from a dozen or so touring cars of officers who have business at or near Brigade Headquarters to the echelons of supply well in rear, which are not immediately necessary. It becomes desirable to sort out all this mass of M. T. and to lay down the principles which govern the movement of each part. For this purpose it will be best to superimpose the transport on a march road, not in contact with the enemy, and to take bird's-eye view of it. It might look something like this:—

Advanced Guard	.. Say, one Regiment.
Main Body	.. Brigade Headquarters and Signals. Two Regiments. Battery R.H.A. and Ammunition Section R.H.A. Field Troop, S. & M. (horsed half-troop). Provost and Traffic Troop (less M. T.).
Brigade H. Q. M.T.	.. Brigade Commander's car. Signals wireless lorry. R./T. Tender R. A. F. (if attached). Motor cars of O. C. Field Troop, O. C. Signals. S. M. O., C. I. A. S. C. and others.
In a M. T. Column	.. M. T. of Field Troop. Cavalry Brigade Field Ambulance. Brigade " A " Echelon, 2nd. line M. T. Ammunition Section, M. T. Company. Mobile Veterinary Section.
Provost and Traffic Troop	M. T. employed on duty along the route.
At a place of concealment or moving up towards end of march	.. M. T. Company. Headquarters Baggage Section.
At S. R. P. or a place of concealment or moving up	.. Supply Section.

During an advance it will be almost essential to Brigade the " A " Echelon lorries to facilitate control. The latter, however, must not be too rigid. Units have now to depend on this echelon for a great part of their equipment and necessities so that access to unit lorries

must be readily obtainable and units even allowed to withdraw one or more lorries to take up essential stores without the necessity of applying to Brigade Headquarters which may be two miles away. The O. C. who will probably be the O.C. Section which finds the lorries, must be trained to appreciate the needs of units and to co-operate in ensuring their supply. This echelon, like the Ammunition Section, must be used boldly, so that its contents are always at hand and yet it must remain concealed from both ground and air observation. This will entail frequent moves and the O. C. must have fresh locations ahead, reconnoitred with a plan for air defence.

This brings us to the question of command and protection of the M. T. Columns at the halt and on the move, from ground and air. It will be for the Brigade Commander to decide whether it will not be advisable to detail an officer of experience from one of the Regiments to command this mixed M. T. Column. It is vitally necessary that the column should be well-controlled and ready to move as soon as an opportunity offers. It must be handled from a tactical as well as from a technical point of view.

Protection on the Move.

Disregarding the Brigade Headquarters M. T. which will be close enough to the Brigade itself to render extra protective measures unnecessary, there will be two separate columns to be considered. The mixed column and, further back, the M. T. Company Headquarters with the Baggage and Supply Sections.

With the exception of the Field Troop lorries the personnel of these two columns are quite unarmed and their vehicles will be an easy prey for any party of raiders or dacoits. It is considered essential that the lorries of the Ammunition Section should each carry two armed guards. These could be found from certain dismounted personnel from the Regiments. In addition the Field Ambulance must often, after an engagement, leave some of its vehicles to collect the wounded and some sort of protection will be necessary for these.

To provide an armed guard for every lorry in the Brigade is out of the question as it would entail dismounting 179 men. Some protection would be gained by arming the drivers, but a man cannot drive and fight at the same time and mobility forms the principle weapon of defence. But there are 50 per cent. spare drivers and these could do a certain amount. The Brigade Commander would, however,

never be free from a fear that at any critical moment, his transport containing the resources of his fighting machine, might be held up by a handful of enemy cavalry thus causing him to halt and turn to its relief, or else that it would not for the same reason, arrive in time to enable him to carry an engagement through to success. No Commander can deal properly with an enemy in front if his attention is distracted to the protection of a lengthy L. of C.

Armoured cars would solve the problem but it is unlikely that these will be available in sufficient quantities for the purpose.

The most probable solution would appear to be to arm all drivers with rifles and to issue two Lewis guns per Headquarter or Section of M. T., better still two of the new automatics now being tried out in India. If these could be mounted in Austin Sevens their usefulness would be vastly increased as they could work in pairs for mutual protection and rapidly move up a lorry congested road to any threatened point. Additional trained I.A.S.C. personnel would be required to work these guns.

Air defence of the columns would also be facilitated by the issue of these guns as each lorry could be fitted with a clamp of a simple nature on which the gun could be mounted for A. A. sighting.

Let us take the I.A.S.C. column and see how its defence could be arranged on these lines.

The Supply Section will have refilled early in the morning at S. R. P. while the Baggage Section will have collected its loads. Both these Sections will have received orders from the M. T. Company Commander to join Company Headquarters at a suitable concealed point. Here the column will halt until the Brigade has reached, or nearly reached, the area where it is likely to spend the night, when orders for it to make a complete bound forward would be sent. No Commander would be willing to have this collection of lorries making continual tactical bounds behind the Brigade, thus giving away the direction of its march and increasing the risk of losses from air attack.

While awaiting these orders the column would be halted under air cover with all available protective measures taken, such as dispersal in small blocks, scouts posted and riflemen told off for controlled S. A. fire against aircraft. Of these measures careful concealment will be the most effective. If seriously threatened it may become necessary to bolt. For this reason alone, a high standard of

training for both drivers and gunners will be necessary to ensure a quick get-away.

While on the move mobility must form the principal means of defence both from ground and air and every precaution must be taken to ensure uninterrupted running. It is here that the automatics mounted in Austin cars would prove invaluable. While the lorry column is getting away they could halt and deal with any threatened attack or they could move out over reasonable country and deal with a threat before it develops.

In case of a serious attack by armoured cars it would be best to move the lorries across country, for armoured cars are usually confined to roads and tracks. Here the Austins would be employed in reconnoitring a suitable route to rejoin the main road further on.

Protection at the halt or when in contact with the enemy.

There are two principles to be considered, the application of which will depend on the situation, enemy air strength, etc. Concentration, to facilitate all round protection from raids and marauding bands. Dispersal along the L. of C. to render the transport a less easy target for air attack.

In general, where the enemy has an appreciable air force and the country is not unfriendly, dispersal will be advisable. Where, however, we have marked superiority in the air and the inhabitants are hostile, concentration within an area that can be watched by standing and other patrols, will often be necessary. This concentration must, of course, be out of range of, at least, the enemy's field guns. It will probably be necessary to locate one squadron by night as an inlying piquet close to the concentration of M. T. This squadron would find the necessary patrols.

A situation may arise where the forward progress of the M. T. is subject to delay, *e.g.*, where a bridge over a river is destroyed and the only crossing is by a ford impassable to motor vehicles or by country boat. Bridging material is not carried by the Field Troop and would have to be sent up. A Commander would be at a distinct disadvantage if his cavalry were held up owing to transport difficulties. In such a case it would be necessary to use the 20 pack saddles which each Regiment carries in its "A" Echelon lorries, dismounting an equivalent number of men who would be left as a guard for the M. T. As soon as the Brigade had effected a crossing and established a bridge-

head, a dump would be formed on the far side of the river and essential supplies would be sent up by all available pack resources. If the delay were considerable it might be necessary to replace the grooming and picketting gear, great coats and blankets, etc., on the horse until such time as the M. T. rejoined the Brigade.

Thus all the Regiments, the Battery, half the Field Troop, and the Signal Troop can move over ground impassable to M. T. and operate at a limited distance from their supply echelons.

A word as regards the distribution of loads in "A" and "B" Echelons. It will be observed that the grooming brush and other essential items are at present in "B" Echelon. Also officers' kits and cooking pots. It is understood that new loading tables are under issue which will remove these disadvantages and so adjust the loads that all essential articles are in "A" Echelon and the 'luxuries' which can, if necessary, be dispensed with for one or more nights, are in "B" Echelon. Some of the loads appear to render the lorry top-heavy, but it has been found that by practice the bulky loads can be so arranged that the weight is forward and low down. Blankets should be tightly rolled and tied in bundles of ten, while great coats are best rolled up in the coat covers that most regiments provided privately when the coat was carried on the saddle. Picketting gear, etc., should be tied up in troop sacks labelled with the troop and squadron number. Many such detailed arrangements will commend themselves if practice parades are carried out.

The problem of followers is the next that obtrudes itself. No longer can we march with that imposing array of footsloggers armed with hurricane lamps and bath tins. An Indian Cavalry Regiment alone has eighty followers and it is manifestly impossible to provide M. T. for their conveyance; yet it is desirable to retain these followers for employment in standing camps when the Brigade is not on the move. It is understood that the difficulty has been overcome by arranging two scales of followers. The first will be those to be carried on all occasions and this scale will be the absolute minimum. Lorries will be made available for their conveyance. The second scale will be for standing camps and will be somewhat less than that given in War Establishments at present. The balance between the two scales will be left at the advanced base when the Brigade moves out on operations and will be brought up when the Brigade is once more in standing camp.

Prisoners of War.

The evacuation of these will be a considerable problem when the Brigade is operating at a distance from the main forces. Troops can ill be spared to go with them if the numbers are considerable and even if empty supply lorries are available several guards per lorry will be necessary to prevent escape.

In friendly country the problem would be less acute for they should be left in civil police stations with a small guard until collected by rearward forces.

Veterinary cases for evacuation would have to be left with villagers until the Veterinary Services in rear could collect them.

In conclusion it is suggested that the main problem is to ensure that the advantages gained by removing a great portion of the weight from the horse are not lost by the articles being inaccessible when the time arrives for their use. To this end the "A" Echelon transport must be used boldly, communication must be good, and the method of maintaining it understood by everyone. Those in charge of unit lorries must be well trained and selected for their initiative. Officers of the I.A.S.C. detailed for duty with Cavalry Brigades must make a study of the peculiar requirements of cavalry and their tactics to enable them to make decisions to meet the rapidly changing situations when time may not permit of orders being passed to the various rearward echelons. Only by expert knowledge and whole-hearted co-operation will the greatest advantages be derived from the transport which is no longer a 'tail' which merely wants guarding but an essential and integral portion of the fighting Brigade.

While every endeavour has been made to consult official manuals and instructions to ensure that procedure suggested is based on the policy laid down, there are many points on which no such policy as yet exists. The suggestions therefore must be taken for what they are worth and not as an accepted policy.

The latter can only be laid down after Cavalry Brigades have tried out their transport under service conditions and arrived at conclusions on the various problems that have been dealt with here and many others that will undoubtedly arise.

THE NEW IMPERIALISM IN EASTERN ASIA.

BY MAJOR B. R. MULLALY,

10th Gurkha Rifles.

Events in the Far East have developed with the ruthless logic which was expected of the principal actors in the Manchurian drama, and there can be no question of the resumption of control by the central government of China over the territory once known as The Three Eastern Provinces.

Japan has formally recognised the independent government of Manchukuo, and it is certain that public opinion in Japan stands so solidly behind the government in its insistence upon the vital necessity, both strategically and economically, of an independent Manchuria, that secession from the League of Nations will be regarded as not too high a price to pay for the strategic gains and the impetus to Japanese industry which are expected to accrue.

It is clear, from much that has been written in the last few months, that the underlying motives of the Japanese action in Manchuria are still, in many quarters, imperfectly understood.

The issue has been clouded by much talk of the oppression of a weaker power by a stronger, and of an Imperialistic Militarism having seized the World economic crisis as a favourable opportunity for the furtherance of its sinister ends, so that the plain facts of strategic and economic necessity which drove Japan to take decisive action in Manchuria have been, to a great extent, overlooked.

As already pointed out in a recent article in this Journal, *these two paramount and over-riding considerations of national policy were inexorable, and it had long been obvious to all serious students of Far Eastern affairs that action such as that taken by Japan in Manchuria was inevitable and could not have been long delayed.

Ancient myths die hard, and few writers on Far Eastern affairs are able, even now, to resist the temptation of parading the hoary bogey which attributes to Japan Machiavellian designs against the Philippines and Australia and New Zealand as a solution of the problem of over-population. That over-population is one of Japan's

* "Manchuria," *The Background of the Present Far Eastern Crisis*, U.S.I. Journal, July 1932.

greatest problems is perfectly true, but it is not incapable of solution without resort to the desperate expedient of territorial expansion. The Japanese are, above all else, realists, as has been demonstrated on countless occasions in their dealings with China in the last few years, and it is inconceivable that they would invite certain disaster by coming into collision with the British Empire and the United States of America in the Pacific when other means of absorbing their surplus population can be devised. If the idea of territorial expansion was ever seriously entertained as a practical solution of the problem of providing for a rapidly increasing population, there is abundant evidence that it has long since been abandoned, and that a policy of industrial expansion has taken its place. Now, industries require raw materials, and Japan is lacking in many of the essentials required by her rapidly expanding industries. In the search for a source of supplies of these raw materials lies the key to one half of the Japanese policy in Manchuria.

The key to the other half lies in the menace of Soviet Russia. Strategically, it is obvious that Russian paramountcy in Manchuria would be a menace to the very existence of Japan, and this menace has already once been met by the Russo-Japanese war, while there will be few to deny that a conflict between Japan and Russia is not beyond the bounds of possibility, some would say probability, in the future.

The Japanese people believe most fervently in the righteousness of their cause, and regard their country as the only bulwark against Bolshevism in the Far East. They find it difficult to understand the sensitiveness of the nations represented at Geneva, and of the United States, over this Manchurian business in view of all that the Powers have suffered at the hands of China for years. They feel that, by forestalling Russia in Manchuria, Japan is serving the true interests of civilization in the universal fight against the threat of Communism.

They argue that this is a matter which concerns the whole world and not the Far East alone, for Bolshevik supremacy in Manchuria would spell complete chaos in China and throughout the adjacent countries, with consequent immense loss to commerce and security. They point to the mischief already caused in China by Communist activities and to the fact that vast areas of that distressful country are, even now, under the complete control of Soviets organised on the

approved Moscow pattern. They maintain that a peaceful, well-governed Manchuria, will not only provide a check on the flow of much of the poison which is being poured into China, mainly through Harbin and the Chinese Eastern Railway, but will prevent, to some extent, its dissemination throughout the Pacific and beyond.

Such being the point of view of the Japanese people, a very brief survey of the history of Russian policy in the Far East, and of the trend of its present developments, may be of interest.

II.

The Imperialism of Czarist Russia was dictated by the inexorable search for ice-free ports as an outlet to the sea. It was only towards the East that such an outlet was possible, and it is often forgotten that it is towards the East that the Soviet, fundamentally as imperialist as any previous government of Russia, is looking to-day.

The period of Russian aggression in the Far East began about the middle of the last century, when events in Europe, which shortly afterwards culminated in the Crimean War, made it necessary for Russia to strengthen her position in Eastern Asia. The weapon was to hand in the person of Nicholas Muravieff, better known as Muravieff Amursky, the Governor of Eastern Siberia, by whose able diplomacy the Treaty of Aigun was signed in 1858 with China, and Russia secured the whole of the Northern bank of the Amur river from the Argun Fork to the sea. The South bank as far as the Ussuri remained Chinese and it was agreed that the territory between this river and the sea should, pending further negotiation, remain in common between the two nations. For this Russia had not long to wait. As a reward for her services as "honest broker" in the negotiations which led to the Treaty of Tientsin between China and Great Britain and France, a Convention, signed with the Chinese government at Peking in 1860, gave her the whole of the South bank. This is now the Primorsk Province.

Having secured her position in Eastern Siberia and Primorsk, Russia turned her attention southwards and showed her hand when Japan, in 1895, after decisively defeating the antiquated army of China, forced the signature of the Treaty of Shimonoseki, by which the independence of Korea was to be recognised and Japan, in addition to an indemnity of two hundred million taels, was to receive Formosa,

the Pescadores and the Liaotung Peninsula. Here Russia stepped in and did some bullying on her own account, persuading Germany and France to join her in "advising" Japan that the occupation of Port Arthur would "destroy the political balance in the Far East." Thus Japan was cheated of the fruits of her victory.

The war had demonstrated China's military impotence to the world and there now ensued a fierce scramble among the Powers to secure "spheres of influence" and "concessions." Russia led the way in this unseemly scramble. Her first step was the establishment of the Russo-Chinese Bank, the object of which, although it was ostensibly an ordinary joint-stock concern for the exclusive purpose of developing commercial relations with the Far East, was the exploitation of the situation in Russia's interests.

Then followed the negotiations for the construction of the Chinese Eastern Railway which had long been a cherished dream of the builders of the great Trans-Siberian Railway, who realized how greatly the work of construction would be facilitated and how substantial an economy would be effected in mileage, if, instead of following the long and circuitous route along the Amur river, the line could be carried straight across the intervening salient formed by Manchuria. The Russian government was equally alive to the political and economic advantages latent in the idea. After prolonged and delicate negotiations, Russia finally induced the Chinese government, in the person of Li Hung Chang, to agree to the construction of a line across Manchuria from Chita to Vladivostok, and the famous Chinese Eastern Railway was born. The agreement reached took the form of a Treaty of Alliance between Russia and China, under the terms of which the latter agreed to the construction of the railway and the two nations undertook to support each other against any armed aggression by Japan. The next move in the game was the acquisition by Russia in 1898, with cynical insolence, of the lease of the Liaotung Peninsula which she had prevented Japan from securing as the legitimate spoils of war only two years before.

It now became clear that Russia's aggressive policy constituted a deadly menace to the very existence of Japan. A suggestion by the latter that an agreement should be arrived at whereby Japan would undertake to abstain from interference with Russian plans in Manchuria if Russia would similarly allow Japan a free hand in Korea, came to naught, and Russia's feverish activity in the work of railway

construction, the fortification of Port Arthur, the great reinforcement of the Russian troops in the Far East, and all kinds of military and naval preparations, made it clear that she was prepared to support her ambitions by force of arms.

There followed the Boxer Rising of 1900 which afforded Russia the opportunity of occupying Manchuria, treating it as conquered territory and of intensifying her provocative policy in Korea. Finally, the situation became so serious that Japan was compelled to accept the challenge, and the Russo-Japanese war followed. The defeat of Russia compelled her to abandon her aggressive designs in South Manchuria and from now on, Japan became the paramount power in Manchuria and Korea.

As the result of her great victory, Japan secured the lease of the Liaotung Peninsula and the railway from Dalny to Changchun. This has been developed into the great South Manchuria Railway which has done so much to open up and develop Manchuria. Japanese enterprise and capital have been poured without stint into the country and, in the years that have passed since the Russo-Japanese war, she has steadily consolidated her position.

During the period of the Great War and the Russian Revolution she held undisputed supremacy in these regions until, in 1924, Russia was once more in a position to reassert herself and the triangular struggle between Japan, Russia and China began again. The end of this struggle is not yet in sight, but Japan has won the first round by her determined action in Manchuria.

With the consolidation of the Bolshevik regime in Russia a new technique made its appearance in Russian policy in the East. This consisted in seizing every opportunity which presented itself for disseminating communist doctrines amongst the various comparatively backward and credulous peoples inhabiting the countries bordering on Russia, with the object of establishing Soviet states which would, in their turn, serve as centres for the further introduction of communist doctrines into the countries adjoining. This policy has met with considerable success, notably on the borders of Turkestan and Afghanistan. At the same time Russia has ceaselessly fomented class hatred and discontent among the working masses of the world, with a view to the consummation of "The World Revolution."

As far as China is concerned, Russia relied mainly on the latter policy and, under the astute guidance of Borodin, met with considerable success. At first an attempt was made to secure control of the government of China in Communist interests and Russian advisers wielded considerable power in the counsels of the Nationalists. In 1927, however, a reaction set in and, since then, Russia has reverted to the policy of underground intrigue which she is employing all over the world. The conditions in China are peculiarly favourable to communist propaganda, a large measure of success has been achieved, and the work is still being assiduously carried on. The mass of peasants and workers, at the best of times living on the edge of starvation, bled white by the exactions of the warlords, and the hordes of unpaid and ill-disciplined soldiery who are, in most cases, indistinguishable from bandits, coupled with the absence of any stable central government, form a fertile soil for Communist doctrines. Great areas have passed under the control of local organisations which are Soviets, pure and simple.

At the same time the Communist poison is working in the masses throughout the country, and the whole picture presented by China is one which justifiably fills Japan with foreboding and confirms her in her belief that Russia is the great enemy of civilization with whom a reckoning is bound to come.

In Manchuria, Russia has been checkmated by Japan. The competition of the South Manchuria Railway, with its port of Dairen, conducted with characteristic Japanese efficiency, and the network of new railway construction over Manchuria, had already greatly reduced the value, both strategic and commercial, of the Chinese Eastern Railway. The establishment of the new Manchurian state, under Japanese tutelage, has now completed its ruin, and has, by cutting off Russia from direct access to the Pacific, almost isolated Vladivostok and greatly increased the vulnerability of the whole of Eastern Siberia.

Until she is in a position to take positive action to meet this development, it is certain that Russia will continue her present policy of doing all she can, in collusion with China, to embarrass the progress of Japan's measures to acquire complete control over Manchuria.

Long before the present extension of Japanese influence, however, Russia had realised that Japan's position in Manchuria would effectively block her further activities southwards through that country.

She had accordingly turned her attention westwards to Mongolia and Turkestan, where for years she has been working to extend and consolidate her position.

III.

In the heart of the continent of Asia, covering an area of some 1,370,000 square miles, lies the vast tableland which we call Mongolia. The cradle of the fierce nomads who, from time to time, swept over not only the Far East but also the Near East and a great part of Europe, Mongolia produced Genghiz Khan, under whom and his successors the Mongols were the rulers of a vast empire. The Yuan dynasty of China, which ruled from 1260 to 1368, was founded by Kublai Khan, the grandson of the great Genghiz. After many years of strife with their successors, the Ming Dynasty, the Mongols accepted the sovereignty of China and the country became, in 1689, a part of the dominions of the Middle Kingdom.

Nothing now remains to mark the former greatness of the Mongols except a few ruins, the legends of the glory that has departed, and a scattered, semi-nomadic population of some two million backward people. This decline of the Mongols was brought about, to a large extent, by the introduction of Lamaism, which, with its vast monastic system, saps the energy and intelligence of any nation upon which it fastens. Mongolia, nevertheless, remains a country of very great importance in the politics of Eastern Asia, on account of its geographical position, its economic possibilities and its untapped natural resources.

The Mongol tribes fall naturally into two main categories—those of Inner Mongolia and those of Outer Mongolia. The tribal organisation remains much the same as it has been for centuries in the territory immediately abutting on China proper, but has suffered severe modifications, amounting to virtual abolition, in Outer Mongolia where Soviet influence now reigns supreme.

In Inner Mongolia the Chinese devised an alien institution known as the League, which was designed to weaken the ancient tribal organisation and facilitate the passage of real power into the hands of the Chinese officials. This has had the desired effect of weakening the Mongol princes by playing upon their mutual rivalries and jealousies to the advantage of their Chinese rulers. At the same time the loose

and, on the whole, benevolent control which China had for centuries exercised over Mongolia, eminently suited both parties but made the way easy for Russian intrigue which did not neglect the opportunity here presented for further consolidating the position of Russia on her Eastern borders. The effect of this intrigue became at once apparent on the downfall of the Manchu dynasty in the revolution of 1911.

Instigated and supported by Russia, the Mongols declared that the allegiance which they had given to the Manchus was not owing to the new regime. The independence of Mongolia was proclaimed in 1912 and was recognised by Russia. The Chinese authorities were compelled to retire from Outer Mongolia and that territory fell more and more under the influence of the Russians.

The Russian revolution gave China a short-lived opportunity of once more resuming her nominal sovereignty over the whole of Mongolia, and the autonomy of Outer Mongolia was revoked, but the loose and inefficient grasp of the Chinese government was unable to retain control or to stay the march of events. In the next few years Mongolia became one of the principal centres of White Russian intrigue in the abortive attempts to bring down the Soviet government, and the country suffered from the attentions first of Ataman Semenov, and then of Baron Ungern von Sternberg who established a reign of terror equal to the best efforts of the Bolsheviks. Ungern was eventually driven out by Soviet forces in 1921 and from that time onwards Soviet influence has gone from strength to strength in Outer Mongolia.

On the total elimination of the White Russians a "Peoples Provisional Revolutionary Government of Mongolia" was established which soon developed into an orthodox Soviet, inspired by, and represented at Moscow. The whole question of Russian influence in Outer Mongolia has been used as a bargaining pawn in the repeated efforts which Russia has made in the last few years to secure the resumption of diplomatic relations with China. A short lived conference met in 1925 for the discussion of Mongolian affairs, but was adjourned *sine die* without anything having been settled, and China has made no further attempt to rehabilitate herself in her former territory.

The methods pursued by the Soviet in Outer Mongolia are typical of those which have been employed with such success in Russian dealings with other backward peoples on the borders of the Soviet Union and have met with uniform lack of any serious setback.

To begin with, the tribal organisation of the Mongols, already essentially communistic in principle, lent itself to easy adaptation to the main teachings of Bolshevism and the transition from the ancient tribal council to the Soviet was accomplished without very great upheaval or difficulty.

The material advantages which the Soviet system has conferred upon Outer Mongolia have, curiously enough, been a contributory factor in hastening the process of sovietization and the once impoverished Mongol tribesmen now enjoy a degree of material prosperity which is in marked contrast with the state of affairs that existed under the suzerainty of China. This has been brought about by the efficiency with which the Russians have organised the economics and commerce of the country.

Banking has become a State monopoly, controlled by the only bank in Outer Mongolia, the Mongol Bank, which is entirely managed by Russians. Under its aegis the finances of the State have considerably improved and it is perhaps significant that in the officially published figures no mention is made of indebtedness to Russia. All trading activities have been concentrated in the hands of a Government trading monopoly known as the "Moncencop", which, as its name indicates, is a central co-operative organisation. This supervises all Mongol trading ventures, while another organisation, known as the "Stor-mong", has centralised all Russian trading interests. Transportation has become the monopoly of the "Mongolian State Transport Company"; road-making and the use of mechanical transport are increasing the facilities for the flow of trade outwards. As was to be expected, this flow is now towards Russia, and not, as heretofore, towards China.

The rigid monopolies which have been established in banking, trade of all descriptions, and transportation, have succeeded in killing outside competition and the once prosperous trade which passed between Urga and Kalgan has virtually ceased to exist. The rich export trade in furs, hides, sheep and camel wool, which used to flow down through Kalgan and thence along the Peking-Suiyuan Railway to the sea at Tientsin is practically extinct. The whole of the export trade now goes North to the Trans-Siberian Railway and Russia, with considerable gain not only for the Russians but also for their Mongol protégés.

Having thus placed the material resources of the State upon a comparatively sound footing the Russians have turned their attention to the education of the Mongols in the Bolshevik creed. Great attention is paid to this and selected Mongol youths are sent to Russia for higher instruction in the tenets of Bolshevism and for training in the approved methods of furthering the advent of the world revolution, while the usual intensive propaganda and anti-capitalist and anti-religious teaching are carried out unceasingly throughout the country. All outside influences are rigorously guarded against and it is exceedingly difficult for a foreigner to enter the country; mere sightseeing is severely discouraged. Chinese are regarded as foreigners equally with the rest and it is probably easier to get into the country from the Russian than from the Chinese side.

Russian influence reigns supreme in all the activities of the people and thus has Russia succeeded in adding Outer Mongolia to the wall of sovietized states which she has built up on her Asian borders.

IV.

Further westwards again lies the great territory of Sinkiang, or Chinese Turkestan.

The Chinese were acquainted with, and nominally ruled this remote region as far as Kashgar as early as the first century A. D., but although Genghiz Khan overran the country in the 13th. Century, their dominion was never effective until about the middle of the 18th. Century.

Chinese rule, such as it was, was of such a nature that rebellions were of frequent occurrence and, in 1862, when the great Mahomedan insurrection spread to Turkestan, the territory was virtually lost to China.

Kashgaria fell to Yakub Beg and the constant disturbances which kept the country in a state of unrest afforded Russia the pretext for occupying Kuldja in 1871. This event roused the Chinese government to action and it was determined to undertake the colossal task of reconquering Sinkiang. The history of this expedition and the account of how the Chinese, by such laborious methods as sowing and reaping crops at each oasis, succeeded in transporting an army across the desert from Kansu, are of absorbing and probably unique interest. But succeed they did, not only conquering the North of the province,

but later, at the death of Yakub Beg, reoccupying Kashgar. In 1881 Russia returned the Kuldja district to China, and since then Sinkiang has, nominally at least, remained a part of the Chinese dominions. The Revolution of 1911 had strangely little effect on this remote territory and while the rest of China has suffered from the ravages of civil war, banditry and communism, Sinkiang has enjoyed almost unbroken peace.

The physical features of Chinese Turkestan are sufficiently well-known to require no detailed description here, suffice it to say that the great potential wealth of this vast region of mountain and desert lies in its untapped mineral resources. Gold is found in many parts and the Altai range is a vast repository of mineral wealth, while petroleum, silver, copper and iron are known to exist in many localities. All these riches only await the development of the country and the improvement of communications. The Altai goldfield already employs several thousand workers. Russia has naturally been fully alive to the great possibilities of Sinkiang and the adjoining territories. There has taken place a great development of communications in the neighbouring Russian territory, the latest and most important manifestation of which is the completion of the Turkestan-Siberian Railway.

The construction of this railway is an event of great importance both strategically and economically. The "Turk-Sib" bridges the gap between Lucovaiya in the South and Semipalatinsk in the North and completes the circuit between Tashkent and the Siberian Railway at Novo Simbirsk. At Lucovaiya connection is made with the European lines through the Caucasus and at Semipalatinsk with the great Siberian system through Novo Simbirsk, and thus a valuable alternative route has been created in addition to the previously existing single route provided by the Trans-Siberian Railway.

The possible bearing of this development upon the security of India will not be discussed here, but Japanese opinion sees in it a threat through China from the point where the railway reaches Sinkiang onward *via* Lanchow and the Lunghai Railway to the coast.

The economic effect of the Turk-Sib cannot but be of the utmost importance in facilitating the exploitation of the natural resources of Central Asia and it is bound to have a serious effect upon the trade of the North-Western Provinces of China, Kansu and Sinkiang, which will find it easier and cheaper to trade with Russia than with China.

The railway will open up vast areas for cultivation and one of the first results will be a great increase in the area under cotton, which is of such importance to the Soviet and which figures so prominently in the Five Year Plan. Mineral deposits of very great richness and, at present, practically untouched, will also be made accessible.

The scheme of development which is to follow the completion of the line is a part of the Russian programme for the creation of a great new territory in Siberia and Central Asia, where the vast natural resources of these regions are to be exploited and made to serve the ends of the new Russian Imperialism. One of the most important projects designed for the attainment of these ends, a project which has received due attention in the press of the Far East but which has, apparently, escaped the notice of the press of the rest of the world, is the proposed construction of the great steel plant in the Altai. Such a plant would supply Russia with the means of providing for future railway construction in this region, and, in war, with a centre for the production of munitions buried in the heart of Central Asia in a situation of unique invulnerability even from air attack.

Whether Russia can repeat in Sinkiang the process which she has brought to so successful a conclusion in Outer Mongolia, and create there another sovietized buffer state, remains to be seen, but there can be no doubt that the completion of the Turk-Sib and the development of the adjacent regions will greatly facilitate the attainment of such a plan. Its importance to British interests on the one side, and to China on the other, needs no emphasis.

Blocked as she is by Japan's commanding position in Manchuria, Russia has transferred her attention to Mongolia and Chinese Turkestan and it is in these regions that she is making preparations for the next stage in that march towards the South which was the keynote of Czarist imperialism as it is the inevitable manifestation of the new imperialism of Soviet Russia.

The socialist Bertrand Russell, in his book "The Problem of China," admits the essential imperialism of the Russia of to-day when he says: "The Asiatic expansion of Bolshevik influence is not a distinctively Bolshevik phenomenon, but a continuation of traditional Russian policy, carried on by men who are more energetic, more intelligent, and less corrupt than the officials of the Tsar's regime....." But he only admits half the truth, for the Russian penetration of

the adjacent Asiatic territories, has, besides its purely imperialistic aspect, the object of providing jumping-off grounds for the better dissemination of the tenets of Bolshevism in the countries beyond.

It is not extraordinary, then, that Japan is determined to keep Bolshevism at arm's length, and, with the object-lessons of Outer Mongolia, the Soviet states of Central Asia, and Russian activities in and around Sinkiang before her is determined to prevent Russia from securing a foothold in Manchuria. China is impotent; it is useless to refuse to face the hard fact that either Japan or Russia must be predominant in Manchuria. Failure to face this fact is fraught with dangers to the peace of the world, the full extent of which it is not yet possible to estimate.

Russia, once established in Manchuria, would be in a position the more easily to carry on an intensive campaign for the further disruption of China. Placing aside for the moment the obvious strategic considerations of such a position, the Soviet would be able to undermine, by propaganda and by support of subversive elements, the Japanese dominion in Korea, whilst exploiting, in Japan itself, the labour troubles which are the inevitable concomitants of intensified industrialisation.

By her determined action in Manchuria Japan has delivered a well-timed blow at the new imperialism in Eastern Asia.

BADGES.

*Worn by the Indian Soldier from the time of the Mutiny to the end
of the Great War.*

By YUSUF.

One of the many post-Mutiny reforms was that of reclothing the Indian Soldier. The European-type uniforms gave place to the more practical variety of clothing, which had so well served the recently-raised Irregulars. Brass helmets, Persian hats, shakos, and forage-caps disappeared as did the cross-belts. The various badges and belt-plates, which embellished them, went the way of all unwanted brass in the East—to the melting-pot; so much so, that, to-day, scarcely one can be found!

For many years after the Mutiny, badges, in the Native Army, were articles worn only by Officers. The system of dressing the men regimentally out of clothing allowances led to so much divergence of pattern that the wearing of badges, as a distinguishing-medium between Units, was quite unnecessary. They were not authorized and were seldom worn. Sowar and Sepoy remained badgeless until after the Second Afghan War. This campaign, with its large concentrations of troops, the universal adoption of khaki, and more uniform patterns of dress, made it advisable to employ some simple type of identification for regiments.

Brass numerals, three-quarter inches in size, were issued for wear upon shoulder-straps, and some regiments began to adapt badges, to be displayed by their men, after the manner of those worn in British regiments. These badges were in no way an official issue—in fact were often unauthorized. They were paid for from regimental funds and allowances. The designs were drawn up by the regiment, and the badges either die-struck in England, or else hand-made by the *Mistri*, or by a local metal-worker, who cast them in a mould of sand and sugar, and finished them with a file. Some were very handsome—others crude!

Badges may be classified as:

- (a) Head-dress.
- (b) Collar.
- (c) Cavalry pouch-badge and belt-plate.
- (d) Shoulder.

(a) *Head-dress badges.*

Metal *pagri*-badges have never been popular in the Indian Army (possibly on account of their expense), though some regiments have worn them for half a century and more. Most Corps considered that the *pagri* with a coloured fringe, *kulla*, or *pag*, was sufficiently distinctive.

Pagri-badges were never worn by Cavalry, Artillery, or Transport.

They were worn in 1914 by all ranks of the 1st. Sappers and Miners and by about forty Infantry regiments. They had also been previously worn by the 8th. Madras Infantry (disbanded in 1903), and by the 26th. Punjab Infantry. The buglers of the Madras regiments wore glengarry caps, with badges in them. Badges were also worn by the Gurkha Rifle Regiments, upon their kilmarnock caps, an exception being the 4th. G. R., who wore no badge.

A short description of some of those badges in use when the Great War broke out is of interest, as several of the regiments have since disappeared.

1st. S. & M., 14th.	Wore the Prince of Wales's plume, adapted
Sikhs & 61st. Pioneers ..	at the time when they were 'P. of W.,' regiments.
1st. Brahmans ..	In brass, two holy fish from the Ganges upon a tablet, bearing '1776,' the date this regiment was raised.
2nd. Rajput L. I. ..	Brass bugle with 2 between strings.
4th. Rajputs ..	White-metal 'Khanjar' (dagger).
6th. Jat L. I. ..	Brass bugle with 6 below.
7th. Rajputs ..	Brass cypher of Duke of Connaught with Roman number and title.
8th. Rajputs ..	Brass circle bearing title, surrounded by laurels, and surmounted by Crown—Numeral in centre.
15th. Sikhs ..	Black steel quoit. (Worn in khaki only).
16th. Rajputs ..	Brass 'Gateway of Lucknow,' surmounted by numeral, and scroll 'Defence of Lucknow.'
17th. Infantry ..	Large crescent in aluminium.
18th. Infantry ..	Crescent and five-pointed star.

- 28th. Punjabis .. White-metal crescent and quoit below a crown.
- 30th. Punjabis .. White-metal Roman numerals within a laurel wreath, surmounted by a crown.
- 31st. Punjabis .. White-metal circle bearing title, surmounted by crown, within circle a star of eight points, numeral in centre.
- 32nd. Sikh Pioneers .. White-metal quoit bearing Roman numeral and title, surmounted by a crown and crossed axes. Below quoit the motto. 'Aut viam inveniam aut faciam.'
- 34th. Sikh Pioneers .. Upon a brass 'Star of India,' a white-metal crowned garter, bearing the title and containing the number. Below, crossed axes.
- 45th. Sikhs .. White-metal quoit with 'Kirpan' (Sikh dagger) above.
- 48th. Pioneers .. Brass crossed axes upon a white-metal star of six points.
- 63rd. Palamcotta Light Infantry .. Brass French-horn with number in the curl and crown above.
- 72nd. Punjabis .. White-metal peacock and title.
- 74th. Punjabis .. Brass Chinese dragon.
- 79th. Carnatic Infantry .. Brass circle bearing the title and containing the numbers, surrounded by laurels, and surmounted by a crown.
- 80th. Infantry .. Brass numeral within a laurel wreath.
- 81st. Pioneers .. Brass circle bearing the title and containing the number, surmounted by a crown and surrounded by laurels.
- 83rd. Wallahjahbad Light Infantry .. Brass bugle with number between the strings.
- 86th. Carnatic Infantry .. Brass circle bearing the title and containing the number, upon a crowned star of eight points.
- 88th. Carnatic Infantry .. Solid brass circle, containing the title and number, surmounted by a crown and surrounded by laurels.

- 90th. Punjabis .. White-metal Burmese 'Kylon' with number and title below.
- 91st. Punjabis .. White-metal crossed 'Dahs'.
- 101st. Grenadiers .. Brass grenade with white-metal horse on ball.
- 102nd. Grenadiers .. Brass grenade with white-metal Prince of Wales's plume on flame and 'Sphinx' on ball.
- 104th. Rifles } .. A black crowned bugle with numeral
125th. Rifles } between the strings.
- 107th. Pioneers } .. Brass garter bearing the number and title.
128th. Pioneers } Within the garter crossed axes.
- 110th. Mahratta .. Brass bugle with strings.

Light Infantry

The cap-badge of the 2nd. Gurkhas was a Prince of Wales's plume in black. All other Gurkhas wore a device of crossed 'Kukris' in white-metal. The 1st, 6th, 8th, 9th and 10th. crossed the kukris back-upwards while the 3rd, 5th and 7th. crossed them blade-up. All wore the numeral above the kukri except the 6th, who wore no numeral, and the 9th. who kept it between the handles. The later pattern badges of the 1st. and 3rd. had, respectively, the Prince's plume and the cypher of Queen Alexandra, over the numeral. The 1st. G. R. wore this badge also in bronze upon their service hat.

(b) Collar-badges.

The only regiments whose sepoy's wore collar-badges were:—

8th. Madras Infantry wore an elephant (Awarded for Assaye).

1st. Bombay Grenadiers wore a grenade.

61st. Pioneers .. P. of W. feathers over crossed pick and shovel.

81st. Pioneers }
107th. Pioneers } .. Brass crossed axes of different patterns.
121st. Pioneers }
128th. Pioneers }

113th. Infantry wore a brass 'Sphinx.'

(c) Cavalry pouch-badges and belt-plates.

Before the issue of bandoliers, most cavalry wore a pouch to contain their ammunition, either on a waist, or a shoulder belt. Metal badges were sometimes worn upon these pouches. Certain regiments also wore belt-plates upon the waist-belt. These usually bore a number or a badge engraved or super-imposed upon them.

In 1914 the following regiments wore belt-plates:—

1st, 2nd, 9th, 14th, 15th, 18th, and 19th. Lancers.

6th, 12th, 16th, 26th, and Guides Cavalry.

All were of brass except the 19th. and Guides, which were of white-metals.

(d) *Shoulder-badges*, (known officially as Numerals or Titles).

The shoulder-badge, though the least ornamental, is the most important badge of the Indian Army. It is the only badge worn on Service, and, indeed, has for many years been the only badge worn in any order of dress by far the greater portion of the Indian Army.

Mention has already been made of the brass numerals, issued by clothing-factories. These were possibly once universally worn, but by the nineties most Corps had unofficially adapted badges of their own design, for wear with khaki, reserving the official numerals for use in full-dress uniform. The practice soon crept in of substituting the regimental badge for the official numerals, even in full-dress; so much so that by 1914 a bare dozen battalions were wearing the latter article.

(i) *Period Prior to 1903.*

Bengal and Punjab cavalry wore on the shoulder-chains simple badges, made up in the regimental shops, usually consisting of the number and BL, BC, or PC. The 11th. and 6th. wore a Prince of Wales's feathers. The Madras, Bombay and Hyderabad Contingent Cavalry wore more ornate badges, combining the numeral and title with crossed lances or sabres.

The Artillery wore the battery initials, *i.e.*, G.M.B. for the Gujerat Mountain Battery, etc.

In the Infantry many regiments, particularly in the Bengal and P. F. F. wore plain numbers, though some Punjabis wore the number and P. I., cast in a straight line. The 34th. Punjab Pioneers wore the plain title 'Pioneers'. Gurkha numbers were blackened.

Most of the Madras Infantry had the number and M. I. or M. L. I., though the 20th. wore a full title, and the 23rd. a bugle with the number, and title below. The seven battalions localized in Burma wore titles 'Burma' and numeral of the Burma numbering. The 6th. Burma Bn. (31st Madras L. I). wore at one time a white-metal title bearing both designations.

The Bombay Infantry usually wore the word 'Bombay' in a curve below the number. The 1st. Bombay Grenadiers and the

Bombay Pioneers wore the full designation in a double curve. The 3rd. Light Infantry wore a badge of similar design to the 23rd. Madras. The three Baluch regiments wore black titles, that of the 27th. having a French-horn with figure I in the curl and the word 'Belooch' below. The three Bombay Rifle regiments wore the title 'Bombay' under a bugle in black, without any number.

The 1st Moplah Rifles wore an Arabic 'I' and curved title 'Moplahs' in black. The 2nd Moplahs had a Roman 'II' and title in brass.

(2) *Period 1903—14.*

The reorganization of 1903 meant a change in designation of nearly every Indian Army Unit and necessitated an alteration in the pattern of shoulder-badge of every Cavalry Regiment and Mountain Battery and of almost every Infantry Corps.

The total number of Indian Army Units which existed in this period, inclusive of Transport and Medical, was over two hundred and fifty. Each of these Corps had its own distinctive shoulder-badge, and most of them wore these through the period of the Great War, and until the re-shuffle of 1922-23.

Owing to the fact that there was no standard-pattern, or official issue, of badges in the Indian Army, as existed in the British, and, in fact, every other army in the world, there was tremendous diversity of pattern in the designs of these.

All were of brass except those of the 19th. Lancers, Guides Cavalry, 54th. Sikhs, and 57th. and 59th. Rifles, which were of white-metal, and the 39th, 42nd, 55th, 71st, 77th, 104th, 123rd, 125th, 127th, 129th, 130th, and the ten regiments of Gurkha Rifles, which were black.

The Cavalry usually wore the number followed by 'L' (Lancers) or 'C' (Cavalry), through the 3rd, 19th, 21st, 31st, 33rd, 34th, 35th, 36th, and Guides wore the full title in various patterns. The 29th. included crossed lances, and the 34th. sabres in the design. The 33rd. wore, over the number, a crown to denote that they were the 'Queen's Own', and the 6th, 11th, 18th, 26th, and C.I.H. had, as part of their badge, a Prince of Wales's plume, to show that they had at some period been 'P of W' regiments.

This wearing of a crown or 'P of W' plume on the shoulder is peculiar to the Indian Army.

Mountain Batteries wore the number and M. B. in a straight line.

In the Infantry, there was a multitude of designs. The 1st, 2nd, 4th, 8th, 16th, 18th, 45th, also 2nd, 1/3rd, 7th and 8th Gurkhas wore the old pattern separate numerals, while the 11th, 17th, 20th, 23rd, 25th, 26th, 29th, 31st, 33rd, 34th, 39th, 52nd, 55th, 56th, 57th, 59th, 67th, 74th, 80th, 82nd, 91st, 96th, 97th, 99th, 105th, 109th, 110th, 112th, 113th, 114th, 120th, and 10th Gurkhas wore one-piece numbers, varying in size from $\frac{1}{2}$ to $1\frac{1}{4}$ inches.

The 19th, 21st, 27th and 28th Punjabis favoured Roman numerals, that of the 21st having the word 'Punjabis' super-imposed.

The 5th, 103rd, 104th, 123rd, 125th and 127th had bugle-horns, and the 102nd had a grenade, with number in white on the ball, and scroll 'K. E. O.' below.

The 10th, 30th, 35th, 47th, 51st, 63rd, 71st, 73rd, 86th, and 1st, 2/3rd, 4th, 5th, 6th and 9th Gurkhas wore the initials or title in a straight line.

The 43rd. and 106th. preferred a lozenge form.

The remaining regiments wore the number and a curved title, though the size, are and type of lettering were in scarcely two regiments the same.

The 36th. Sikhs had a peculiarly solid label and the 13th. and 48th. curious wavy affairs. The Guides' title curved in a way opposite to all others. The titles of the 14th. Sikhs and 130th. Baluchis included a white Prince of Wales's plume.

The Transport Units of the Supply and Transport Corps usually had a brass numeral, Arabic or Roman, followed by T. C., M. C. (Mule-corps), B. T. (Bullock Troop), C. C. (Camel-corps), or P. C. T. (Pony Cart Train).

The Army Bearer Corps wore large letters A.B. C. and the number of the Division.

Imperial Service Troops normally wore only the name of the State, though the Cavalry regiments of Bhopal, Hyderabad, Mysore and Patiala included crossed lances in the design.

(3) *War Period 1914—19.*

During the war extra regiments of Horse and Foot, Batteries, and Transport Corps were raised. The new Cavalry Regiments wore the

numeral-over-title type of badge, of the same design as the 21st. Cavalry. The Artillery wore the usual Mountain Battery pattern, or were issued with the letters I. M. A.

As regards the new Infantry Regiments, the 49th. had two patterns, one a plain number, and the other the numeral and title 'Bengalis.' The 50th. wore a black 'Kumaon.' The 3/70th. Burma, 111th. Mahars, 71st. Punjabis, and 141st. Bikaner wore the full title, the two former being black. The 85th. wore 85. B. R., and the 60th. and 11th. G. R. wore similar type in black. The 131st. 140th. Patiala, and the 150th to 156th, each received issues, consisting of small size one-piece numbers.

Second, third and fourth battalions of regiments usually wore the same badge as the parent-battalion, but there were exceptions. Each four battalions of the 9th. Bhopal Infantry wore a different badge, the 2nd. Bn. wearing the title 'The Delhi Regiment.' The 2/2nd, 2/3rd, 2/23rd, 3/34th, 2/42nd, 2/43rd, 2/73rd and 2/91st all wore their own pattern.

(e) *Buttons.*

In most Cavalry Regiments the half-ball or ball was popular though several wore buttons impressed with a regimental design.

The old button of the Indian Artillery bore a device of three cannons surrounded by laurel leaves. For many years, however, the R. A. button has been worn by the personnel of the Mountain Batteries.

Native Infantry were at one time issued with brass buttons, on which appeared the number within a 'broken ring' surrounded by laurels. These were discontinued when shoulder-numerals were issued, and a universal 'Crown and Imperial Cipher' button was provided on uniforms supplied from clothing factories.

For use with khaki-drill many regiments purchased buttons bearing a device, similar to that authorized for the officers. A curious exception was that of the 21st. Punjabis. The Officers wore silver half-ball buttons without design, while the sepoys wore brass numbered buttons of the pattern issued by 'John Company!'

LETTERS TO THE EDITOR.

THE PHILIPPINES AND THE PACIFIC PROBLEM.

SIR,

Regarding the interesting article, *The Philippines and the Pacific Problem* in your July issue, which states that the United States House of Representatives has recently passed a bill by which the Philippine Islands will be granted complete independence within eight years, I presume that the Hawes-Cutting Independence Bill is referred to. The House of Representatives recently approved this bill, but I understand that in American circles in Manila it is considered that the United States Senate will not pass it. This bill would give independence to the Philippines subject to a plebiscite after a period of twenty years. Meanwhile sovereignty would rest with the United States, and the effect of the bill would merely be to make some expensive changes in the system of administration and a redistribution of administrative responsibilities. In exchange for the Filipinization of the government, the personnel of which is already 98 per cent. Filipino, the United States would be represented in the Islands by an American High Commissioner, whose authority would be supreme. He would in effect have the powers of a Viceroy.

It seems to me that this correction of an apparent error in the article may be useful.

Yours faithfully,

E. S. MACL. PRINSEP, MAJOR,

Probyn's Horse.

18th September 1932.

SIR,

In reply to Major Prinsep's letter I would point out that in the opening paragraph of my article entitled "*The Philippines and the Pacific Problem*," it is distinctly stated that no final decision has been reached on the question of Filipino independence. The question has of course been under consideration for some time and a variety of suggestions have been put forward. Though there is no doubt much opposition to any measure involving complete independence in the immediate future, it is equally certain that an influential section of American business opinion supports the early withdrawal of control

for financial reasons. As however the whole question is largely a matter of party politics, he is indeed a bold prophet who would venture to foretell future developments, especially on the eve of a Presidential election. Filipino independence must come sooner or later and it was on the assumption that it might quite possibly come sooner than the majority expect that the article was based.

Yours faithfully,
M. E. S. LAWS, CAPTAIN,
Royal Artillery.

28th October 1932.

QUETTA OR CAMBERLEY ?

SIR,

I am sure that many of us feel that John Hooker's pathetic appeal in your October issue should not go unanswered. I am not certain that his main object, *i.e.*, the pursuit of the really wealthy young woman is a cause in support of which we need draw swords, but his description of his handicap vis-a-vis his opposite number from Camberley is a more serious matter.

As a start, I think our friend can take a little comfort from the statement with which indeed 'The Mother of Four Officers' did qualify her remark on the rating of officers who have passed the Quetta Staff College, *viz.*, that for those who wish to serve on the Staff in India, Quetta is much the best place in which to secure one's education, if only because of the friends made there who will be all over India afterwards.

Further I do suggest to the pursuer of fair favours that the answer to the searching parent is, first, a stiff upper lip, and, second, in answer to, "Which Staff College?" a reply, "Oh! *The* Staff College! Didn't you know they were one?" A little later in the evening John Hooker really ought to enlighten the assembled guests, for they need it. Without the least disloyalty to his fellow competitors for the soft hand who have enjoyed the home Staff College, he might murmur that, of course, given the choice, he for one would never select the ease and seductions of two years at Home when there was the same study to be had in a land for "he-men" where, thanks be, soldiering was still practical! He might go on to add that old Jerry Jackson who

just passed in miles above a lot of lads going to Camberley, has definitely asked for Quetta. He might also say that one unique friend of his who did his first year not so long ago at Camberley and his second at Quetta, found the latter far the more searching of the two!

Joking apart, dear Editor, I think the excellent John Hooker is suffering from an hallucination as regards his handicap in the race for the lady. Disparity between the outputs of the two Colleges if it ever existed, is now, I am certain, a thing of the past.

I am, Sir,
Yours faithfully,
"A Student of Form."

MILITARY NOTES.

ARABIA.

The Situation in Saudi Arabia.

The new nomenclature, used above, for the territories ruled by Ibn Saud was introduced by royal decree at Riyadh on 18th September. At the same time a council of ministers is to be set up to prepare and submit to Ibn Saud a constitution for the King's rule, succession to the throne and for the organization of the Government. The change would appear to have as its objects (a) the unity and solidarity of the two kingdoms of Hedjaz and Nejd under one name, (b) the forestalling of any efforts in the future to revert to a separate kingdom of the Hedjaz.

MOROCCO.

FRENCH ZONE.

Operations.

Minor operations were carried out during the month of July by the Marrakech and Tadla mobile columns, and a steady advance was made without many losses. A few casualties, however, occurred as a result of raids on posts and convoys.

On 7th July an attack on a convoy caused the following casualties : 2 French non-commissioned officers and 5 natives killed, 1 French officer, 1 non-commissioned officer and 3 natives wounded.

On the night of 13th July tribesmen counter-attacked a position which had been occupied that morning without loss by a detachment from Meknes. The tribesmen were driven back but the French lost 1 non-commissioned officer and 1 soldier of the Foreign Legion killed ; 1 French officer, 7 legionaries and 1 French soldier wounded.

In the course of an engagement against raiding tribesmen on 25th July, 1 French officer and 1 non-commissioned officer were killed (the latter, *Maréchal des logis* de Sandras, was the nephew of M. Herriot, the Prime Minister); 3 native soldiers were also killed and 2 wounded. The raiders, who had penetrated behind the French lines, were put to flight with considerable loss.

A mobile column operating in the neighbourhood of Nouachott, Mauritania, was ambushed by a band of rebel tribes under the leadership of Ahmed Hammadi. This band is alleged to have crossed the frontier from the Spanish territory of Rio de Oro.

The casualties officially reported are as follows:—

Killed : 1 officer and 5 European non-commissioned officers.

Missing : 11 *Senegalese Tirailleurs* and 28 *Gardes Maures*.

The rebels, pursued by another mobile column and aeroplanes, are reported to have fled over the frontier into Rio de Oro, where the French troops were unable to follow them because of the Franco-Spanish treaty of 27th November, 1912.

Oil.

In the Djebel Bou-Kennfoud region, 20 kilometres south of Djebel Tselfat, towards Moulay-Idriss, oil of good quality has been found at a depth of 470 metres. Its proximity ($1\frac{1}{2}$ kilometres) to the Meknes—Petit-Jean route ensures easy access and transport.

Ten tons a day are at present being extracted ; this will be increased later when more powerful plant is installed.

Oudjda-Fez railway.

General Messimy, Senator for the Ain Department, and a former Minister for War and the Colonies, recently undertook an official tour in Morocco in his capacity of *Rapporteur* to the Senate on the proposed loan required to finance the completion of this railway.

In his report, after mentioning the advantages which will accrue to Morocco's agriculture and its mining industry, General Messimy stresses the importance of this railway from the military point of view, and points out that whereas during the Riff campaign of 1925-26 reinforcements from Algeria and Tunisia reached Tadla very slowly, it will soon be possible to run 15 military trains every 24 hours on this line when completed.

PERU.

Peru-Colombia Frontier Incident.

On 1st September a group of civilians from the town of Iquitos on the Amazon in the North-East of Peru captured the town of Leticia on the Amazon in Colombia, and hoisted the Peruvian flag.

The boundary between Colombia and Peru in this district was fixed by a treaty drawn up in 1922 and ratified by the two countries in 1925 and 1927, after being in dispute for many years. Under this treaty Colombia was granted a corridor running due south from the Putumayo River to the Amazon between Brazilian and Peruvian territory. Leticia, the town in dispute, is a port on the Amazon at the southern end of this corridor.

The development of Leticia by the Colombians combined with a certain amount of smuggling by her citizens, has damaged the trade of the port of Iquitos, which is further up the river. As a result the citizens of Iquitos have taken the law into their own hands. Their action has placed the Government of Peru in an awkward predicament. On the one hand they wish to honour their treaty obligations, but on the other hand they are unable to take any action to remove the invaders from Leticia, as such action would cause a revolt in Iquitos, where the public demand for the retention of Leticia and the revision of the treaty is intense.

Colombia has protested vigorously and has voted a sum of £2,000,000 for frontier defence.

SPAIN.

Strength of the Army.

A decree of 8th September, 1932, fixes the total strength of the army in other ranks for the year 1933 at 151,000, of which 111,657 will form the army in Spain, and 39,343 that in Africa.

The figures for last year were :—

Total other ranks,	Spain	..	98,114
"	"	Africa	.. 45,849
	Grand total	..	143,963

It will thus be seen that while the army in Morocco has been reduced by some 6,500, that in the Peninsula has been increased by 13,500, the result being an increase in the total strength of the army of 7,000 men.

TURKEY.

Language reform in Turkey.

Not content with his earlier cultural achievements—the abolition of the fez, the closing of the Dervish monasteries, the emancipation of

women, the substitution of a modified Roman alphabet for the old Arabic script—the Gazi Mustafa Kemal Pasha now proposes to purify the Turkish language, expunging from it all foreign elements and substituting words of pure Turkish origin.

For some months the comparative freedom which he has been able to enjoy from the conduct of affairs of state has been devoted to a study of the origins of the Turkish language, and his researches have led him to the conclusion that the debt owed by the European languages to Turanian origins has never been properly appreciated—the very word “culture” has, it would appear, a Turkish origin.

The fruits of his labours are shortly to become manifest. A linguistic Congress is to be held at the presidential palace this month, and is to be followed by an organization of special means to spread throughout the country a new Turkish language recreated on the lines which have been indicated by the Gazi's months of research.

The task to be accomplished is a formidable one for the language of the educated Turk contains thousands of words and usages borrowed by the Ottoman Turks from Arabic and Persian, while the modern “journalese” includes innumerable words of French, Italian and English origin, many of them, such as “orevar” (au revoir), “kokteyl” (cocktail), hardly recognizable in their new rendering.

Fortunately for the prospects of the scheme not only is the modern language a very rich one but it has behind it a background of medieval Turkish much of which has only become known to the world from the researches of European scholars during the present century and, though there may be difficulty in finding scientific and philosophical terms of pure Turkish ancestry, there is little doubt that the Gazi's characteristic energy and thoroughness will enable him to succeed in this reform as he has in the many others associated with his name.

U. S. A.

War Department Appropriation Bill for the Fiscal Year 1st July, 1932, to 30th June, 1933.

1. Summary of Appropriations.

The annual Appropriation Bill for the Army usually receives Presidential signature in February. This year, after seven months' consideration by Congress and a struggle of quite unusual severity, it was eventually signed on 14th July, two weeks after the commencement of the financial year for which it makes provision,

The following is a summary of the final appropriations as compared with those for the preceding year :—

—	1931-32.	1932-33.	Increase or decrease.
	dollars.	dollars.	dollars.
Military expenditure ..	335,505,965	290,300,024	—45,205,941
Non-military expenditure ..	111,067,270	106,578,489	—4,488,781
Total ..	446,573,235	396,878,513	—49,694,722

2. *Principal increases and decreases.*

The following items represent the principal savings effected in military expenditure :—

	dollars.
(a) Subsistence of the army ..	10 millions approx.
(b) Clothing and equipage ..	2·5 „
(c) Army transportation ..	2·5 „
(d) Military post construction ..	18·5 „
(e) Barracks and quarters ..	2 „
(f) Air corps ..	6 „

The only increased vote of any consequence is that for the Ordnance Department : an extra 400,000 dollars has been allotted to this supply branch. The total sum earmarked for mechanization is 504,000 dollars of which 200,000 dollars is expressly designated for the purchase of Christie tanks.

Last year the curve of expenditure on the U. S. Army, which had tended upwards for the six previous years, dropped to the extent of 5 million dollars, due to lower commodity prices and a small cut in the Air Corps vote. This year's cut of 45 million dollars (about £11 million) can also be accounted for, to a considerable extent, by still lower commodity prices and by expedients, such as the reduction of stocks and the transference of a large sum for barrack construction to a civil vote. When every allowance for such factors has been made, there remains a sum estimated at 8 million dollars (about £2 million) representing a real cut in the Army vote, the effect of which must be felt immediately in the service. The major part of this sum is to come off the allotment to the Air Corps.

ARMY REORGANIZATION.

1. *General scheme.*

The War Department in Washington has announced an important reorganization of the peace time military establishment of the United States.

Previously the continental United States was divided into three Army Areas, each sub-divided into three Corps Areas, but the Army Areas existed only on paper and no commanders or staffs, were designated for them though legislative authority existed for their appointment should the necessity arise.

The new organization provides for General Headquarters and four Field Armies.

The Chief of Staff of the United States Army is appointed Commanding-General General Headquarters, and his staff will be composed of the War Plans Division of the War Department General Staff and other personnel as required. In addition to his other duties therefore, he is placed in command of the Field Army Group composed of four Field Armies.

The four Field Armies are composed of divisions of the Regular Army, National Guard and Organized Reserves organized into corps. Each Field Army contains two or more of the present Corps Areas.

The Senior Corps Area Commander in each Field Army is appointed Commander of the Field Army and his staff consists of his Corps Area Chief of Staff and other personnel as required.

The First Field Army, with headquarters in New York, will deal with the North Atlantic and the North-Eastern frontier.

The Second Field Army, with headquarters in Chicago, will deal with the strategic area of the Great Lakes and the central Northern frontier.

The Third Field Army, with headquarters at San Antonio, will deal with the region of the Gulf of Mexico and the Southern frontier.

The Fourth Field Army will have its headquarters at first in Omaha, the headquarters of the present Senior Corps Commander, but it is intended that its headquarters will be moved later to San Francisco. This Army will deal with the Pacific Coast.

2. *Objects.*

The War Department order gives the following as the objects of the reorganization :—

- (a) To provide appropriate agencies to complete the development of war plans prepared by the War Department General Staff.
- (b) To provide commanders for high units, and their staffs, prepared to take the field and execute the plans prepared by them.
- (c) To provide agencies for the conduct of command post and other suitable peace-time training exercises.
- (d) To provide, as a preliminary step to any general mobilization, an adequate force, within the minimum of time with the maximum of training, sufficient to protect any general mobilization that may be necessary.
- (e) To provide a force sufficient to handle all emergencies short of a general mobilization.

REVIEW.

A Short History of the 17th and 22nd Field Companies, 3rd Sappers and Miners, in Mesopotamia 1914—1918.

(Printed for private circulation.)

An interesting and readable account of the work carried out by the Field Companies of the 6th (Poona) Division in Mesopotamia, based on the available war diaries and the personal recollections of surviving officers.

The period covered by the narrative is from the embarkation of the division at Bombay in October 1914, to its surrender at Kut, when both the companies became prisoners of war. Two short narratives of the experiences as prisoners of a Mussalman Indian Officer and a Hindu Sapper are added as appendices. They are interesting to contrast ; as they show how much better the Turks treated prisoners of their own religion.

The narrative brings out well the varied and almost entirely improvised work which falls to the lot of a Field Company in war. In the first month the work done included a gallows in Basra City and a strong room for the Army Pay Department, besides numerous bridges, piers and sheds.

The sufferings of the troops in the siege of Kut are vividly described.

The book is well got up and has ten clear sketch maps, but unfortunately suffers from careless proof-reading.

K. G. M.

NOTE.—*A few copies are available for sale to members on application to the Commandant, Royal Bombay Sappers and Miners, Kirkee. Price Re. 1/- per copy in India or two shillings elsewhere.*

1891. 1892. 1893. 1894. 1895. 1896. 1897. 1898. 1899. 1900.

1901. 1902. 1903. 1904. 1905. 1906. 1907. 1908. 1909. 1910.

1911. 1912. 1913. 1914. 1915. 1916. 1917. 1918. 1919. 1920.

1921. 1922. 1923. 1924. 1925. 1926. 1927. 1928. 1929. 1930.

1931. 1932. 1933. 1934. 1935. 1936. 1937. 1938. 1939. 1940.

1941. 1942. 1943. 1944. 1945. 1946. 1947. 1948. 1949. 1950.

1951. 1952. 1953. 1954. 1955. 1956. 1957. 1958. 1959. 1960.

1961. 1962. 1963. 1964. 1965. 1966. 1967. 1968. 1969. 1970.

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1981. 1982. 1983. 1984. 1985. 1986. 1987. 1988. 1989. 1990.

1991. 1992. 1993. 1994. 1995. 1996. 1997. 1998. 1999. 2000.

2001. 2002. 2003. 2004. 2005. 2006. 2007. 2008. 2009. 2010.

2011. 2012. 2013. 2014. 2015. 2016. 2017. 2018. 2019. 2020.

2021. 2022. 2023. 2024. 2025. 2026. 2027. 2028. 2029. 2030.

2031. 2032. 2033. 2034. 2035. 2036. 2037. 2038. 2039. 2040.

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2101. 2102. 2103. 2104. 2105. 2106. 2107. 2108. 2109. 2110.

2111. 2112. 2113. 2114. 2115. 2116. 2117. 2118. 2119. 2120.

2121. 2122. 2123. 2124. 2125. 2126. 2127. 2128. 2129. 2130.

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EDITORIAL.

The White Paper, putting forward proposals for Indian constitutional reform, has met with a curious reception. In England among die-hard extremists it has been dubbed "an abject surrender to Indian extremists"; in India the Congress faction consider it a surrender to "British die-hard Imperialism." Needless to say, it is neither of these things. The report is merely the result of three Round Table Conferences, a series of Commissions and innumerable inquiries and discussions carried out with the object of finding a suitable basis for the conversion of the present system of government in India into a responsibly governed Federation of States and Provinces. The White Paper sets forth certain proposals which will now be placed before a Joint Select Committee (in consultation with Indian representatives). The Committee will later make a report on them to Parliament.

These proposals contain nothing new and those who have followed constitutional events of the last few years will find in them only a precise summary of what was anticipated. Recent events in Ireland are perhaps the reason for the special emphasis laid on Safeguards. It is proposed they should be as follows:—

- (i) the prevention of grave menace to the peace or tranquillity of India or of any part thereof;
- (ii) the safeguarding of the financial stability and credit of the Federation;
- (iii) the safeguarding of the legitimate interests of minorities;

- (iv) the securing to the members of the Public Services of any rights provided for them by the Constitution and the safeguarding of their legitimate interests ;
- (v) the protection of the rights of any Indian State ;
- (vi) the prevention of commercial discrimination ;
- (vii) any matter which affects the administration of the Reserved Departments.

The Reserved Departments referred to are Defence, External Affairs and Ecclesiastical administration, and these will be entrusted to the Governor-General personally. For the purpose of assisting him in the administration of the Reserved Departments the Governor-General will be empowered to appoint at his discretion not more than three Counsellors, who will be selected at the personal choice of the Governor-General. This, so far as the fighting forces are concerned, implies a War Minister whose appointment is analogous with that of the present Political Secretary. The rights and conditions of service of the personnel of the defence forces will continue generally to be regulated as at present.

In the constitutional scheme there are still a number of snags. Foremost among these is Federal Finance and it is noticeable in the White Paper that this most important subject is dealt with almost sketchily. It involves the setting up of a Reserve Bank, subventions to three new provinces, the re-allotment of revenue among Provinces and the appropriation of certain revenues for the Centre. Whether the Centre will collect enough money for carrying on the government of India without resorting to increased and new forms of taxation seems doubtful. Democracy is an expensive business. There are also outstanding the questions of the Princes' share in the Federation, Burma, the Supreme Court, Aden, electoral rolls and a host of minor matters all demanding settlement before the ponderous machinery of Federation can be set in motion. It appears uncertain therefore that India will be federated within the next two years ; and within that period many things can happen.

The latest Training Directive issued by Army Headquarters is a document of exceptional importance and interest. **Tactical Mobility.** Logically and concisely it reviews the general trend of training since the war and concludes with regret that all post-war efforts directed towards real mobility—more machine-guns, tanks,

mechanised administrative services, aeroplanes and the decrease in load carried by man and horse—have failed to produce the hoped for result.

The reasons for this failure are primarily due to memories of the Western Front where the numbers of machine-guns and the staunchness of their crews stultified manœuvre. It is inevitable that these hard won experiences should have influenced our post-war training and possibly forced us to retain a certain rigidity in our tactical methods. Whilst we have rightly kept in mind the importance of making the best use of our fire in battle, we have in the process tended to overlook the importance of manœuvre and surprise.

There is now a new spirit abroad. The last few years of experiment and study at home have shown that, no matter how flexible or mobile the auxiliary arms or ancillary services may be, unless the cavalry and infantry are trained to equal flexibility and mobility in battle the increase of power and weight behind the line is more a liability than an asset. As the Commander-in-Chief said at the conclusion of the recent Administrative Exercise "the tail now wags the army dog." The present general tendency of military thought is to seek a compact, quickly moving and more combative professional force, which, aided by all modern devices and in co-operation with the air, will compel quicker decisions by "keeping a campaign fluid" and by forcing the issue before nations can mobilise the *imponderabilia* of their national resources and thus produce the static conditions and checkmate of the Great War.

Since 1918 many avenues to success in war have been explored and many theses expounded by military writers and enthusiasts. No particular arm and no particular weapon can by itself achieve the victory. As in the past, it is only by the closest co-operation between the various arms and skill in the handling of our weapons in conjunction with manœuvre and surprise that a battle can be won.

The training pamphlet now directs that for the ensuing year "units and lower formations will concentrate on light infantry and light cavalry tactics on the battlefield, while higher formations will study the methods by which such manœuvres can best be assisted and maintained." This opens up a fascinating field of inquiry and thought, and one which gives scope for the initiative and individuality of every leader from Army Commander to Section Leader. It seems to us that this training is more necessary for the infantry than the cavalry

in India. The cavalry have maintained their "light" traditions and if not tied to roads by administrative necessities are fully capable of light tactics. For them a little less on the horse in the shape of gear and a little more in the form of rations might be the solution.

The infantry position is different. It might best be explained by an illustration. If one was with a party of Punjabi Mussalmans in the Salt Range shooting ooriyal and asked their advice as to the best way of approaching the quarry, there would be a clever method of stalking exhibited. If one, with the same party of men, had to carry out the same manœuvre against a machine-gun or an outpost, it is possible that some section commanders would slavishly follow a method of advance laid down in the manuals without using their common sense to consider how it should be adapted to make the best use of the cover afforded by the ground using wind, shadow and covered approaches. The basis of the training of the Light Division by Sir John Moore was, for the regimental officer, the development of his initiative and power of command and practice in the use of ground in varying types of country; for the individual soldier, the inculcation of physical fitness, skirmishing ability and a high degree of skill in the use of his weapons.

Whilst stressing the importance of this resuscitated training it is important to observe that it is not new; John Moore was the originator in modern times and it goes back to the earliest fighting ages. It does not alter any principles, it does not absolve us from the necessities of control and security, and it calls for even closer co-operation between all arms. It will be interesting to see how the broad policy laid down by A. H. Q. is translated into fact and action by units, and we shall welcome any suggestions or articles dealing with this subject. The North-West Frontier Province—one of the Empire's best training areas—seems to offer especial possibilities in this connection.

There is little monetary satisfaction in the restoration of half of the ten *per cent.* cut in pay since this restoration is contiguous with an increase of income-tax. Indeed there are those who will declare that what the Government of India gives with one hand it continues to take away with the other. It is not practicable to give exact figures showing the effect of the new Indian Pay (Temporary Abatements) Bill beyond noting that the new proposals help the junior man the most and give help, however microscopic, where it is most needed. The Under Secretary of State gave

The Cut.

some figures in Parliament showing that those drawing Rs. 400 a month received an increase of 4·3 *per cent.* and thereafter there is a gradual decrease to the four or five thousand rupees a month official who is helped only to the extent of one *per cent.* More informative and disillusioning were the figures given regarding the effect on the Indian Budget. The ten *per cent.* cut saved four and a half million pounds for Government; the present diluted restoration will bring in three millions. What Government loses on the swings it covers in its own roundabout manner.

Such criticism is facile and at the present moment popular. But it overlooks the more important and the more relevant factors. There is firstly the financial condition of India which continues to be critical, and any slight improvement brought about by stern economy and heavy taxation is not sufficient yet to enable the whole cuts to be restored. The fighting services, whose pay is not statutory, have to share the burden with the other services and it would be unfair in the present times of acute depression to expect that one citizen should benefit at the expense of his neighbour. From the debate in Parliament there are some potential crumbs of comfort and these deserve to be printed *verbatim*. The Under Secretary of State introducing the Bill, said: "There might be certain individual cases in which the men might find themselves no better off or actually worse off. In these cases adjustments would be made so that no one would be actually worse off under these proposals.....Standing as we did on the brink of a great constitutional change, there were strong reasons for relieving the financial embarrassment and giving practical proof of the reality of Parliamentary control to the Services in India. They hoped by the reduction of the cut and the undertaking that it would be removed at the first possible opportunity to do something to set the apprehensions of the Services at rest." Equally reassuring was the statement made at the conclusion of the debate by the Secretary of State for India. Deploring the fact that the cuts were solely necessitated by the extreme urgency of the financial position "he regarded their restoration in full as the first charge on the Indian Budget," and further that "the fact that such a Bill was necessary was not an example of the futility of Parliamentary Safeguards but rather an example of their reality."

There can be no doubt of the determination of the authorities, both civil and military, to restore the cuts when the financial situation

permits and there is no doubt either that they are fully cognisant of the hardships imposed upon the services by the present serious reductions ; therefore the sympathetic gesture of a 5 per cent. restoration should be accepted gratefully as an earnest of good intentions.

In the spring a Pathan's fancy lightly turns to thoughts of loot, but it is pleasant to record that the recent operations **Frontier Unrest.** in Waziristan have successfully deflected this vernal diversion. The origin of the trouble goes back to the dynastic difficulties of Afghanistan which are most evident in the turbulent Southern Province of Khost. The tribesmen of this Province have never taken kindly to any form of settled government and since the middle of last year have been subjected to intensive pro-Amanullah propaganda. Methods adopted to allay the trouble have not been successful although any attempted rebellion by recalcitrant tribes have been effectively put down by Kabul. Last November the Dare Khel rose but submitted before the outbreak attained serious proportions. Unfortunately one of their leaders, the Lewanai Faqir, escaped with a few followers, and he was responsible for the uneasy situation in Waziristan in February and March. His peripatetic movements on propaganda missions across the Durand Line were suspected and the behaviour of his hosts in British territory—presumably the Madda Khel—lay them open to deep suspicion. He, however, evaded all efforts to capture him and spent his time in holding out promises of loot to the young Waziri hot heads with whom he came in contact. At first only a few small parties crossed into Afghan territory, but this definite movement—like all dramatic tilts at authority on the Frontier—spread so rapidly that between the 14th and 25th February a *lashkar* of 5,000 men enlisted from Tochi Wazirs, Dauris, Mahsuds and Wana Wazirs, was on the move towards Afghanistan. Political pressure was of no avail owing to the fact that the local Maliks could exert no authority over their young fire eaters. Air action against the "recruiting areas" was out of the question at the moment since the movement was so widespread and scattered that bombing would inflict more harm on the innocent and peaceful than on the absentee guilty. Measures were then taken to establish a cordon of ground troops and irregulars, with R.A.F. co-operation, on the line Arawali—Thal—Miranshah—Datta Khel in order to prevent the *lashkar* receiving supplies or reinforcements. By the 1st March, when the cordon was in position, the *lashkar* had increased to 8,000 men of whom the majority

were Mahsuds. After an initial success—the capture of a militia post at Bari—the *lashkar* advanced to Matun and were driven back. Three further assaults on the 27th February, 5th March and 8-9th March were made and failed.

In the meantime more pressure was brought, both political and military, upon the offending Waziristan tribes; the cordon was reorganised with troops from India, and the Razmak Column was withdrawn in order that it might be free for eventual possibilities. The Governor of the N. W. F. P. held two *Jirgas* at Sorarogha and Wana when plain speaking to an extent unheard of for many a day was administered to the Mahsuds and Wana Wazirs. A four days' ultimatum was given.

This on top of their repeated reverses at Matun and the approach of reinforcements from Kabul, had a salutary effect on the wayward tribesmen. Within three days, by the 12th March they were streaming back across the Durand Line, their thoughts of loot destroyed, their faith in Amanullah shaken and, it is to be hoped, their respect for the *Raj* enhanced. So far as Afghanistan is concerned the incident is now closed, but until the Lewanai Faqir is captured and until the Madda Khel are taught that it is a wiser policy to co-operate loyally with the authorities in Waziristan, the danger will remain of further incursions and unrest. The operations are a happy illustration of what can be done on the frontier by close co-operation of all the services, political, military, and air, and, incidentally, give the taxpayer little cause for apprehension.

In this number an officer is brave—or rash—enough to dispute the causes of the financial depression with Mr. Taylor, whose lecture on the subject before the Institution last summer was one of our greatest successes. There is considerable horse-sense in Captain Gardiner's view point, but it is unfair and lacking in proportion to despise a theory merely because it indicates what is wrong without being able to prescribe a cure. Diagnosis is always an essential preliminary to treatment. We feel that our contributor begs the question when he refers to a law of "spirals" for he formulates no law and merely records a platitude. If there was no underlying long range cause making for stability why should not production and consumption rise together until even the coolie has his Baby Austin, or conversely why should not production and population be curtailed until the world was reduced to another age of woad?

The answer is, of course, the character of gold. The long range stability which checks movements created by such causes as wars, famines and speculation, is due to the fact that the world has an international store of value which, being composed of a metal which is for all practical purposes indestructible and the stock of which is therefore comparatively constant, remains itself comparatively stable. The theory, which Captain Gardiner objects to, is that this long range stability is not absolute—but is subject to up and down movements which are caused in the long run by variations in the amount of this standard of value available. All economists now recognise this theory; their failure lies in their inability to give practical effect to it.

In his lecture Mr. Taylor stressed the assumption that even with the present world stock of gold there was reason to expect that there would sooner or later be a rise in price levels of 15 to 20 *per cent.* The present downward movement was caused by France and America realising that there was not enough gold to go round; they, therefore, collected it when they had the power to do so and thus intensified the precipitation. These nations will not be able to hold it indefinitely and when it is released the upward movement will begin.

In reducing the problem to its simplest proportions Captain Gardiner has performed an educative service for the unintelligentsia in economic matters. Unfortunately, however, world finance is too unwieldy, too amorphous, a mass to be reduced to any simple chemical constituents, and we are indebted to Mr. Taylor for the following apt illustration of its complexity:—

“You can imagine that molluscs on a rock on the sea-shore might be very seriously concerned with the movements of the sea, which sometimes soused them, sometimes left them high and dry, and sometimes washed them away altogether. As the result of long and painful experience it might dawn on them that there was a certain periodicity about these movements; they would then calculate their duration and arrive at a “law” that waves were of a certain height and followed each other at certain intervals. More scientific oysters might, however, deduce the fact of tidal action and by a supreme effort of reasoning connect it with the moon. Molluscs of Captain Gardiner’s school of thought would deride this theory on the ground that experience showed that waves were due to several obvious causes, the wind, passing steamers, unskilled diving belles, and so on; that they rose to a certain height and then

fell by the force of gravity ; that the intervening trough when too low was again filled up ; that this was all there was to it ; and that talking about the moon didn't help anyway. This would be quite true so long as the poor brutes have to stick to their rock where they are, unable to move. But if they could learn to move (and this is the crux of the matter) though they might not be able to skip about to avoid every passing splash, they would avoid the worst of the trouble if they knew about the tides and regulated their movements to correspond with them."

* * * * *

NOTICE.

As the Institution has enjoyed a particularly successful year financially the Council has decided to assist officers suffering from the cut in pay by temporarily suspending the Entrance Fee. Officers may now become full members on payment of the annual subscription of Rs. 10 only.

Members are earnestly asked to bring these advantageous terms to the notice of non-members.

GOLD MEDAL PRIZE ESSAY COMPETITION, 1933.

The Council has chosen the following alternative subjects for the Gold Medal Prize Essay Competition for 1933 :—

(i) " With the tendency of modern Military Organization towards Mechanisation, the increasing complexity of modern weapons and the dependence of troops on their maintenance services, it is asserted by many that Regular troops are losing the degree of mobility necessary for the successful performance of their role on the North-West Frontier.

Discuss how this difficulty can be overcome so that freedom of action and tactical mobility are assured in the Army in India,

or

(ii) " Discuss the tactical employment of Light Tanks

(a) with Cavalry

(b) with Infantry

in both the plains of India and in the mountainous country of the North-West Frontier : particular reference should be made to the problems of Maintenance and Supply."

(NOTE.—For the purpose of this essay the following may be assumed :—

Organisation—Light Tank Company of 3 sections each of 7 tanks ;
1 Company Commander's tank and 3 reserve tanks.
Total 25 tanks.

Crew of Vehicle—2.

Armament—One .303" Vickers gun (Special tank pattern).

Ammunition—3,000 rounds .303".

Armour—Capable of resisting ordinary .303" ammunition, .303" A. P. and shrapnel.

Speed average—Across country 4—12 m. p. h. Road and track
20—25 m. p. h. Reduced to 15 in convoy.

Crossing power—Trench 5 feet. Water 2 feet 6 inches.

Climbing power—Slope—1 in. 2½. Perpendicular obstacle—2 feet.

Circuit of Action—Road approximately 100 miles.

Petrol fill—20 gallons.

The following are the conditions of the Competition :—

- (1) The competition is open to all gazetted officers of the Civil Administration, the Royal Navy, Army, Royal Air Force and Auxiliary Forces.
- (2) Essays must be type-written and submitted in triplicate.
- (3) When reference is made to any work, the title of such work is to be quoted.

- (4) Essays are to be strictly anonymous. Each must have a motto, and, enclosed with the essay, there should be sent a sealed envelope with the motto written on the outside and the name of the competitor inside.
- (5) Essays will not be accepted unless received by the Secretary on or before the 30th June 1933.
- (6) Essays will be submitted for adjudication to three judges, chosen by the Council. The judges may recommend a money award, not exceeding Rs. 150, either in addition to or in substitution for the medal. The decision of the three judges will be submitted to the Council, who will decide whether the medal is to be awarded and whether the essay is to be published.
- (7) His Excellency the Commander-in-Chief has offered a Special Prize of Rs. 150/- for the best essay submitted on subject (ii). This prize is in addition to any awarded by the Council.
- (8) The names of the successful candidates will be announced at a Council Meeting to be held in September or October 1933.
- (9) All essays submitted are to become the property of the United Service Institution of India absolutely, and authors will not be at liberty to make any use whatsoever of their essays without the sanction of the Council.
- (10) Essays should not exceed 15 pages of the size and style of the Journal, exclusive of any appendices, tables or maps.

SOME ASPECTS OF TRAINING AT HOME, 1932

By MAJOR-GENERAL C. A. MILWARD, C.B., C.I.E., C.B.E., D.S.O.

During the summer of 1932 the writer was privileged through the kindness of the Higher Military Authorities to see something of the Collective Training of the Troops at Aldershot and on Salisbury Plain. It is thought that some of the points of organisation and of training at Home which came to his notice, may be of interest to officers of the Army in India, who possibly may not have enjoyed these opportunities.

I.

ORGANISATION.

Demonstrations on Salisbury Plain.

As a preliminary to the training notes it may be useful to give a short account of these Demonstrations which afforded to about 100 officers of all services of the Army in India a most interesting indication of the latest organisations of the British Army and of Air co-operation at Home.

These Demonstrations were attended also by the officers of the Imperial Defence College and by the junior year of the officers of the Camberley Staff College. They consisted of:—

6th. July, (Morning).—Lecture and demonstration at the R. A. F. School of Army Co-operation, Old Sarum.

(Afternoon).—(a) Inspection of and an Advanced Guard Demonstration by a Cavalry Regiment (2nd Cavalry Brigade), organised in accordance with the latest War Establishment.

(b) Inspection of and Reconnaissance Demonstration by one section Lanchester Armoured Cars, organised on the present and on the experimental War Establishment of a Cavalry A. C. Regiment, (11th Hussars).

7th. July (Morning).—(a) Demonstration of all the latest types of mechanised vehicles, (3rd. Division).

(b) Demonstration of an Infantry Battalion with mechanised First Line Transport, (7th Infantry Brigade), to indicate the lines on which experiments are being carried out in this Brigade and also in the 6th. Brigade, Aldershot.

(*Afternoon*).—(a) Inspection of and Drill and Manœuvre Demonstration by a Tank Company with Sub-Section of Close Support Tanks, of a Mixed Tank Battalion (5th. Bn. R. T. C.).

(b) Demonstration of Bridging and the passage of various types of mechanised vehicles over the river Avon, (by R. E. 3rd Division).

8th. July, (*Morning*).—Lectures and demonstrations by the Anti-Gas School, S. A. S.

An immense amount of trouble had been taken to make all these demonstrations a success. Practically all the troops in Tidworth were required to take part, and a whole day's training was taken up. All the higher Commanders were present throughout. During the demonstrations full explanations were given on Loud Speakers. It was particularly emphasised that all the organisation demonstrated is experimental.

Points of special interest.

(a) In the parade of the *Cavalry Regiment* the most notable demonstration was that showing the 32 lbs. of articles which have been taken off the horse and are now carried in "weight off the horse" lorries.

The Scots Greys were carrying on parade the new Light Machine Gun with which they are experimenting, a weapon much more easily carried on a horse than the Vickers.

(b) In the *Armoured Car Section*, the provision of R./T. and W./T. formed an important feature. In an A. C. Regiment which will always be operating on a very wide front, perfect communications are of paramount importance.

(c) In the *Demonstrations of various types of Mechanised Vehicles*, the following were of special note:—

- (i) The Field Artillery Light Dragon with 18 pdr. This is the universal pattern track chassis, now definitely approved: it is the same as that of the Light Tank, a great improvement for Field Artillery on the overponderous Mark III Dragon which however is still required to drag the 60 pounders.
- (ii) The Battery Staff Crossley 6-wheeler and Light Dragon with tracks—very complete and mobile for the Battery Staff together with all its equipment.

(iii) The Infantry Brigade Headquarters 6-wheeler reconnaissance car and Brigade Headquarter Office lorry.

These are excellent: they provide a mobile office in the worst of weathers, to the Brigade Commander, his staff and clerks, and dry sleeping accommodation.

They give cover for conferences of C. Os., for writing orders and studying maps which are quite impossible to accomplish in the open in mobile warfare in rain.

(iv) Carden Loyd Machine Gun Carriers—the most serviceable vehicle yet invented for the carriage of machine guns forward, bullet-proof and inconspicuous, good mileage, the Ford engine seems to last for ever.

(v) Carden Loyd Carrier with 3-inch Mortar in trailer—the best weapon for engaging hostile machine guns.

(vi) Ditto with Anti-Tank gun—very mobile.

(vii) Austin Seven with R./T. set—the latest thing in R./T., very compact and reliable.

(d) *Infantry Battalion with Mechanised 1st. Line Transport and M. G. Company on experimental basis.*

The Headquarter Wing consists of—

No. 1 Group .. Fighting portion of Headquarters.

2 ,, .. Anti-Tank Group.

3 ,, .. Administration.

4 ,, .. Mortar Platoon.

The A. T. Group and the Mortar Platoon are mechanised. In the Machine Gun Company; Nos. 1 and 2 Platoons carry their machine guns in armoured carriers each with one gun number, and there is a carrier for the Platoon Commander.

The forward role of the M. G. can be carried out firing from the carrier, when stationary.

The remaining personnel of the platoon are carried in unarmoured semi-tracked or 6-wheeled vehicles. In the 6th. Infantry Brigade, experiments are being made with armoured carriers each with a trailer to carry four men of the M. G. team.

In Nos. 3 and 4 Platoons, Platoon Headquarters and each section are carried in one unarmoured semi-track or 6-wheeled vehicle. This has the advantage of keeping the personnel complete and of

reducing the number of vehicles required, but these are unarmoured, large and very conspicuous. They could not come up near the forward Battle Area: the guns would have to be manhandled forward and their vehicles might not find them again in the confusion at the end of a fight in mobile operations.

It may be possible to evolve a three man Carden Loyd Carrier (2 of the gun team), but the difficulty is the transportation of the rest of the Team and at the same time the reduction of the number of vehicles. A possible solution is an armoured track vehicle with a capacity of five men, gun, and ammunition in addition to the driver.

But this would be rather large and conspicuous and not so well adapted for the forward role and for firing from the carrier as the present carrier is.

Rifle Companies.—The Company Commander has a 2-seater car and there is one vehicle to carry 8 Lewis Guns complete.

(e). *Tank Company of a Mixed Tank Battalion.*—It is now practically decided that a Tank Battalion shall consist of both Medium and Light Tanks with Close Support Tanks.

The Light Tank acts as do Destroyers to a Fleet, for reconnaissance, protection and to draw fire.

The Close Support Tank is a Medium Tank armed with a 15 pdr. 2 cwt. gun which can fire smoke or H. E., in place of the 3 pdr.

It will frequently be the only artillery support available in a tank versus tank attack.

(f). *Anti-Gas School, S. A. S.*—A most thorough course of lectures and of demonstrations was given. Every possible defensive measure against gas, which it is essential to know, was explained.

As is natural, it is the experience against German Gas in France and particularly those of 1918, which forms the basis of anti-gas instruction.

It struck the writer that the possible hostile use of gas in Asia is also a matter which the Army in India requires to study, as indeed is being done there.

The conditions in Asia are entirely different to those in France. In many and the most likely theatres of operations in Asia, a very dry climate is experienced, very hot in summer, dry cold with a bitter constant wind in winter, a climate seldom damp or foggy. The soil is

dry and sandy, very different to the mud and marshes of the Ypres Salient. The country is seldom enclosed ; there are no cross roads, few buildings or woods. Except in the defiles of the N. W. Frontier and Afghanistan, there are seldom any obstacles to prevent troops moving off the roads and tracks.

Gas can be ejected by the enemy in three ways : either from cylinders in cloud form, or from artillery and mortars, or from the air. In Asia, static trench warfare, permitting the use of cloud gas, is unlikely to take place. Artillery and mortar gas bombardments require a very heavy concentration of gas shells. It is suggested that this will be seldom possible by an enemy with a long and difficult L. of C. and few railways. The little transport he will have available he will prefer to utilise in the carriage of H. E., and shrapnel gun ammunition. There remains the Air. Large gas bombs can be dropped from the air or gas can be sprayed.

It is considered that this is the main danger to be guarded against, with due regard to the conditions of climate, terrain and the type of warfare. It is interesting to think out on what occasions this hostile weapon can be used and what our precautions must be in defence. Already certain precautions have been taken on the N. W. Frontier. We must be prepared against surprise in War.

II.

TRAINING.

The Training at Home this year was curtailed for reasons of economy like everything else. Further, instructions were issued by the Army Council laying down that the Regular Army is to be trained primarily for overseas expeditions which may be carried out with or without Mobilisation.

The Collective Training carried out in Aldershot in August and September consisted therefore of Inter-Brigade exercises lasting one or two days and nights in which A. C., Air Force, the Cavalry Brigade, various Infantry Brigades, R. E., with a strong proportion of Field and Light Artillery and sometimes Medium and Anti-Aircraft Artillery participated ; in fact, strong Brigade groups of all arms. Sufficient supply lorries were usually available to transport one or two Battalions on each side.

These exercises set by Command and Divisional Commanders, took the form of the various operations which might be met with in

small wars, such as Convoy schemes, and schemes for the defence of, and attack upon, water supply in canals or in pipe lines, when one Brigade Group was usually acting on interior and the other on exterior lines respectively. These gave full scope to the ingenuity, power of quick decision, skill in rapid handling of troops, and military knowledge of Brigade Commanders and to the training of officers and to the mobility of the troops by day and night.

To the rank and file they stimulated interest in training to a remarkable degree. No longer did they find themselves advancing in Brigade or Divisional Attack over the open in stereotyped formation supported by an inadequate artillery against machine guns, a task which the present intelligent young soldier knows would be hopeless in actual operation, but they were taking part in small operations which they could understand and which they felt could be accomplished with the armament in support of them and at their disposal.

Mobility.—The advantages conferred on a Brigade Group which has the Headquarter wing, M. G. Company and 1st. Line Transport of its Battalion mechanised with wholly mechanised Brigade Headquarter Signals, Artillery and Engineers, were very noticeable.

In one exercise, an attack on a canal, the vulnerable parts of which were roughly 5 miles apart round the bend of a salient, the Brigadier made a feint attack by day on one flank with the majority of his force. As soon as it was dark he moved his Brigade Headquarters, 3 Field Batteries, a Medium Battery, R. E. Company and one Battalion by a detour of 30 miles under cover of night to the other flank between 7-30 p.m. and mid-night. The route lay along very twisty narrow country lanes and through the town of Guildford. After a conference of C. Os. at his new headquarters at 1 a.m., the night advance commenced at 3 a.m., and by dawn one Battalion and the Sappers had crossed the Canal unopposed, with all artillery in position to support.

Granted that the country was fairly well known and that the units were at low strength, a great advantage in moves by M. T., this was a good example of the advantages of mobility, when fully utilised, and of clever leading.

Similarly in a Rearguard Action or in any operation where a force desires to slip away unseen, the advantage of Mechanised Artillery, Engineers, Machine Guns, Mortars and A. T. Guns, was made

manifest. The same benefit would however be given to the pursuing force if mechanised, though to a lesser degree.

On the other hand, there would seem to be a tendency in peace time to forget that the most effective means of pinning an enemy to his ground, when he is known to be contemplating retreat, is to attack without delay. On such an occasion nibbling reconnaissance and half-hearted attacks will effect nothing. A definite attack, pushed resolutely home especially on his flank, will hold up his withdrawal, and make him conform. How well the German doctrine of war recognised this was shown during the first days of the Retreat from Mons, on several occasions.

It was only by a miracle and by the unconquerable fighting qualities of the British Soldier that the 2nd. Corps and 4th. Division managed to break off the battle of Le Cateau and to slip away. If they had not succeeded, history might be written differently to-day.

Flank Protection.—The principles of Mountain Warfare piquetting are often utilised nowadays at Home. In fact they are adopted whenever a force is opposed by A. F. V.'s and A. C.'s—all side roads and approaches to the line of march being piquetted and blocked. In one convoy scheme, the Mountain Warfare "Block System" was used, each Battalion being given a definite area of flank protection to hold and the rear Battalion moving up to the point when the convoy was clear of it.

Use of Lorries.—In Aldershot, in each Brigade as a measure of economy, lorries from their Brigade supply echelons, are used during these training exercises for the rapid transport of Infantry Reserves. This would not be possible in war without upsetting supply arrangements. There is little doubt, however, that in the next war, M. T. will be more generally used to move Infantry, both tactically and strategically.

But these lorry columns need careful organisation beforehand. Considerable time is wasted by waiting until a whole Battalion has embussed. It then takes time to move off. It is better for a part of the Battalion to move as soon as it is ready. The slowest type of lorry should be moved last. The Parking is apt to be too congested and difficult to move from. The whole column together, forms a large target for artillery or aircraft.

Communications and Orders.—The ease of communications afforded by W./T. and R./T. was remarkable. It has been said that communications form 75 per cent. of a modern battle, and certainly the chief difficulty of a Brigadier in controlling his Brigade in the field with telephones and visual was the matter of obtaining and keeping touch with his units.

All this has now changed : the Brigade Commander is able to command with ease all the units of a large Brigade Group over a very wide area. Written orders were never issued in the Field. Verbal instructions, with full appreciations of the situation, given out at C. O.'s Conferences sufficed.

Wide Frontages.—It was noticeable that the experimental Brigade habitually worked on a very wide front, single Battalions were sent alone and unsupported to work on the enemy's flank and even to threaten his rear. In one exercise the front of the Brigade, on which it was operating round the enemy's salient, measured almost eleven miles. This is good training, but it is thought that Bus Columns uncovered by tanks or at least armoured carriers, would be vulnerable in real war and not nearly as bold as on manœuvres. Superior mobility and perfect communications have however made wider frontages possible when opposed by a less mobile enemy. In fact mechanised infantry can to some extent take the risks of cavalry, except for the fact that they are tied to the tracks ; they can get away.

The Noise of M. T.—On the other hand all mechanical transport, and not only Tanks, make considerable noise when on the move, and the movement of a large body of troops by this means especially at night, is liable to be given away if the enemy is alert. But the type of movement is very hard to detect by its noise, and on one occasion a force mistook the noise of its own guns for a Tank attack in rear.

Still, the training and use of Scouts is liable to be overlooked these days, but standing patrols thrown well forward in front of a defensive line by night, even Boy Scouts, could give the Commander much useful and vital information by using their ears.

Mystify and Mislead ; Enterprise.—Much enterprise was shown. Endeavours were made to deceive the enemy as to the movement of troops by the attachment to columns of small bodies of Battalions

other than those of the column, to give false identifications by their dead or prisoners.

Every effort was made to obtain information of the enemy's movements. Soldiers were hidden in civil telephone offices in places through which the enemy must pass, to telephone their moves. Scouts in Austin Sevens equipped with the latest portable R./T. were sent round the enemy's flanks and rear and hidden in woods.

How far some of these methods would be possible in actual war is not quite clear, but there is no doubt that the Germans in France in 1914 and the Turks in Gallipoli used them. Anyhow, they show enterprise and initiative and any measures displaying these qualities are not to be discouraged in training.

Village Fighting.—The importance of practice in Village Fighting was brought to notice. In war we are continually fighting in villages, on manoeuvres never. In France the most difficult and most desperate fighting took place in villages and in woods.

The Fog of War.—During the last exercise at Aldershot, an interesting example occurred of the Fog of War, and of how Nature will often counteract all the advantages which modern inventions confer, when the best plans go wrong.

A Brigade Group equipped on the ordinary animal organisation was defending from a central position a long bend of a pipe line of which the front and particularly the flanks were vulnerable, against the experimental semi-mechanised Brigade Group.

A thick fog until mid-day prevented all information from the air of the attacker's advance. The defender's Divisional Cavalry actually sent in identifications of three Battalions advancing direct to the front. This was not accepted as reliable—the plan seemed too simple.

A long and quite unintentional delay before the frontal attack was made, further confirmed the defender's doubts, more especially as feints were being made on each flank. Finally the Defending Commander and his C. R. A., going forward themselves in a car to reconnoitre in the evening, for a proposed counter-attack, were captured. The senior Battalion Commander, brought after some delay from a distant flank, was quite out of the picture, and the Staff had to carry on. Such a situation occurred time after time in the war and was very realistic.

III.

TANK CORPS TRAINING.

On Salisbury Plain throughout August and September similar exercises were carried out by the 3rd. Division..

In addition the Tank Brigade of four Mixed Tank Battalions, for the second year in succession carried out Tank Brigade drill and manoeuvre, and showed, as last year, what a formidable force it is over suitable ground, and how easily a very large number of Tanks can be controlled and rapidly manoeuvred, over a wide area, by modern means of communication after due practice.

IV.

MOUNTAIN WARFARE EXERCISE.

The final collective training of the Aldershot Command was a mountain warfare exercise for which over 100 officers concentrated by car, at Criccieth in North Wales for a four days' exercise without troops. Each of the six Infantry Brigades had its own comprehensive syndicate of all arms.

The object was to give officers some idea of Mountain Warfare in case an Aldershot Division was required to participate in operations beyond the North-West Frontier of India.

The tribesmen were imagined to be well armed and reinforced by a Light Howitzer Battery and some aeroplanes. The country was typical of the Frontier, a deep valley flanked by high and precipitous rocky hills. There was, however, plenty of grass on them and it was agreed by those who have been fated to spend a great part of their lives on it, that the N. W. Frontier would be a much pleasanter spot to live in if it was like Wales. The rough track along which the Austin Sevens and Rileys daily took the officers to the exercise, was supposed to be fit for pack animals only.

Several most interesting points came to light, and gave rise to the usual controversies amongst the Mountain Warfare experts, especially with regard to the positions of piquets and several other thorny questions.

Permanent piquets.—The heights flanking the valley were high and precipitous and some of them a very awkward distance away. This made the scheme a really difficult one, since the presence of a hostile 3.7 Howitzer Battery in the next valley made the permanent piquet-ting a problem.

How far should they be pushed out? If one is to prevent the enemy from placing a F. O. O. on any of the heights commanding the route and from heavily shelling the daily convoy, the permanent piquets must be pushed out an impossible distance.

Their regular maintenance will be an impossible burden to the L. of C. troops. There must be a limit to the distance of piquets from the road, the convoy must risk being shelled; conversely, the hostile Battery must be engaged either from the air or by ground troops, and captured.

The question arose as to the number of Permanent Piquets to be put up. There is always a tendency to put up too many. Their garrisons must be of the minimum strength and to permit this, they must be built as strong as possible. But on the first day it will seldom be possible to put up the outer (bombing) belt of wire. The carriage of R. E. Stores takes up a great amount of transport and it must be limited as far as is possible.

Perimeter Camps.—It is suggested that the most important thing to wire on arrival in camp are the camp piquets. Eventually it is desirable to put a wire fence round a perimeter camp to economise sentries unless it be merely a temporary one.

For it is very unlikely, and especially on the first night, that the camp will be attacked—only on two occasions during the last 70 years has this happened on the Frontier—whereas it is quite likely that a weak camp piquet may be rushed if not wired.

Theoretically, the defence of the perimeter by belts of machine gun fire is very attractive. But this pre-supposes a glacis like surface along it. How seldom will this be the case amongst the Frontier Hills? As usual the answer is found in a combination of arms. To guard the many hidden approaches, men are required and ears and eyes cannot be replaced by machines. In fact in this individual form of warfare, the number of Automatics with which Battalions are now armed is often a positive disadvantage.

It is unlikely that a camp will be attacked, but by exasperated tribesmen it is almost certain to be sniped. Cover therefore is the first thing to provide, for the men, for headquarters, offices and hospitals; for animals, too, if good nullahs exist.

With regard to the siting of perimeter camps, the presence of hostile aircraft and artillery in this scheme made this a problem. The

Air Force representative stated that it would be very difficult for the hostile air force to locate a perimeter camp by night among the mountains, but lights must be limited and dimmed. It is, however, such an ideal bombing target that every precaution must be taken. It can be split up into Unit Camps, each with its proportion of transport, which should be tucked away up side nullahs. This will increase protection duties and might lead to casualties from their own fire, but these disadvantages must be faced. All future camps up the Khyber are thus laid out. What other possibilities are there?

In this exercise side nullahs round the camp site did not exist, so as a possible solution, the main perimeter camp was made 50 per cent above normal size, to allow units to separate and to reduce congestion and loss from bombing.

V.

GENERAL CONSIDERATIONS.

To anyone who served with British Troops in France, and since then has been for many years away from Home, it is always a matter of surprise to find that although the predominance of the motor vehicle and the comparative disappearance of the horse has changed England out of all recognition, the Army at Home is organised in exactly the same way and with horsed vehicles as it was during the war, except for the increase of machine guns.

A host of experiments has been made. Some artillery and other units have been mechanised and the two experimental Infantry Brigades continue to experiment and are equipped with mechanised vehicles of many kinds and descriptions.

The Tank has been improved greatly, but their numbers have decreased since November, 1918.

It is, of course, the stringency of finance which has held up mechanisation and will continue to do so.

It would be foolish to spend large sums on it now since before any major war considerable warning will occur, and, in their present stage, mechanical vehicles are out of date almost before they are delivered. One cannot help wondering however, whether when the crisis comes, the thought that armament would precipitate war, would not prevent their mass production till too late. Meanwhile the problem is, how to get the Infantry forward in the attack.

The Machine Gun.—It was the Machine Gun which caused the majority of the stupendous losses in the war, and it will do so again. Time after time throughout the war was the British Infantry, owing to the exigencies of the situation, sacrificed in inadequately supported attacks against machine gun fire, which it unhesitatingly undertook to its eternal glory. This fact is already apt to be forgotten.

F. S. R. Vol. II. lays down : " Even though the enemy has not prepared final defences infantry cannot succeed in the initial attack unless the fire of the defence is kept under subjection by superior fire power. "

But how often on manœuvres do we see this truth overlooked, with an army equipped on a 1918 basis ?

For any small or ill-trained nation can possess and use machine guns. The most recent example of this is the Chinese who only last year, held up the Japanese frontal advance for several days at Shanghai, though the latter had tanks.

To-day all nations have a greatly increased number of machine guns and with every fresh invention the outlook of attacking infantry looks worse and worse. This is of course the aim of the Disarmament Conference.

The " superior fire power " referred to in F. S. R. is supplied by artillery, infantry machine guns and mortars and tanks.

In 1918 we had masses of artillery and from that experience the exact weight of artillery required to enable infantry to capture and to consolidate a position is known. The artillery now in peace time allotted to each division is sufficient to support only a very small part of that divisional front of attack. This is recognised in the Manual, as are also the limitations of machine gun covering fire.

Under certain conditions infantry can fight their own way forward, with the normal support of other arms. They can do so in small wars, in an encounter battle by manœuvre, by outflanking an enemy with the help of mobile troops or A. F. Vs., under cover of smoke or darkness, in broken country affording cover and covered avenues of approach, or in steep hilly country where covering machine gun fire can be maintained up to the last moment of the assault.

In flat open country, such as for instance the plains of Europe, parts of France, Germany, Northern Italy, Russia, the plains of India,

the deserts of Iraq, against close enfilade machine gun fire, infantry cannot move without the support of overwhelming artillery fire or of tanks.

For the infantry machine gun alone is a very difficult weapon to use effectively in the attack unless it is in an armoured vehicle.

In flat country, its flat trajectory makes overhead covering fire very difficult to arrange, since, owing to the large safety angles necessary, this fire is soon masked by the advancing infantry. If firing from a flank, the same hindrance more quickly occurs, and there may be no flank. It has no searching fire against infantry entrenched or against the hostile machine gun firing invariably from a flank which will always be defiladed to its front. Against troops not entrenched or Reserves on the move the attacking M. G. will be most effective.

It would seem therefore that in the attack, to be effective, the machine gun must be carried forward into or in front of the front line of advance. Yet over open country, under heavy fire it cannot be man-handled forward.

In intersected country this is possible as the Germans showed frequently throughout the war and as we did, particularly during the final advance in 1918. However, country not suitable for the infantry M. G. advance is most suitable for tanks. The modern mortar, too, with its long range and accuracy is, with certain limitations, very effective against defiladed machine guns. The three would seem to be complimentary.

During the past training season the Carden Loyd Carrier has been used in the forward role as an infantry tank with great success. It is quick and armoured, and much less conspicuous than the tank. But however far it may be desirable to equip every Regular and Territorial Battalion with some form of A. F. V., and in the writer's opinion this is the solution, the cost in peace time is prohibitive.

Mechanisation.—Ever since the war the best brains of the Army have been busily employed in trying to predict the form which future war on a large scale will take. Many extreme and exaggerated views have been put forward. In many respects we were very much out of the picture at the beginning of the last war and on the whole the Germans were more correct as to their forecast of the necessities of modern war. In the next great war there will no doubt be more and greater surprises.

The question is mainly, how far mechanisation and armoured fighting vehicles will revolutionise strategy and tactics. By now, opinion on these subjects has more or less crystallised. The following are a few of the points which one hears.

The more one watches manoeuvres the more one realises the advantages which mobility confer.

Over favourable country a strong force of Tanks is a tremendous weapon. Unless opposed by Tanks its action is decisive. One can imagine the effect of such a force moving round an enemy's flank and rear like Stuart's Cavalry in the American Civil War, with many times the radius of action and striking power of cavalry, except that it cannot live on the country.

An infantry formation Commander is paralysed in his action if he knows that a force of tanks is operating against him in his neighbourhood. His one thought is "Where are they?" He is always looking towards his rear. All his movements are limited to the caterpillar like movement of "bounds," in order to keep his force closed up, with his artillery ready to meet a Tank attack.

Artillery will always knock out a tank with a single hit but the latter are not easy to hit when moving fast. The fire of the anti-tank gun is not so effective. There are many parts of a tank where a hit by an A. T. bullet will not be vital.

But like everything else, the Tank has its limitations and its antidotes. On a distant raid its petrol and oil supply will be a problem, although in Western Europe and America, petrol pumps and supply are so universal every few miles, that they may counteract in some degree this handicap. But this is a very real one.

Then there are many parts of the world which are not suitable to Tanks and A. F. Vs.; terrain which they cannot traverse at all or over which their movements would be so slow as to make them very vulnerable to artillery fire. It is reckoned that about 75 per cent of the world's surface is unsuitable to Tank action, but the remaining 25 per cent includes most of the country where all serious wars of the past have been fought since Alexander's time.

Tanks, too, cannot hold a position. Here infantry will always be required. "Infantry is the arm" which confirms victory and holds ground won. The proper co-operation of all arms enables the infantry to confirm victory." (F. S. R. II.)

On the score of expense too, no army can have tanks and mechanical vehicles in sufficient numbers to dispense with the old type of army altogether. Casualties among tanks will be very heavy especially when each side possesses them, but tanks can break off an unfavourable fight more easily than can infantry. Heavy tank casualties are mainly incurred in frontal attacks, which they now, by their mobility, endeavour to avoid.

With regard to the mechanisation of infantry, the modern ubiquity of the motor vehicle makes one wonder whether infantry will ever in future war, in highly developed countries, be called upon to march any distances, other than inside the battle zone.

The disadvantages of such a move by M. T. will always be the carriage forward of the machine guns after debussing, and also of ammunition and 1st. line transport articles, unless these are in track vehicles, and of animals. But M. T. was used by the Germans as early as August 1914 during their advance from Mons, and by us during the 1st. Battle of Ypres, and throughout the war in any emergency, but since then, until quite recently, we seem to have gone back instead of progressing in this respect: this is not good training for the mind.

And now, the numbers of motor vehicles are so enormous and universal all over the world that whole armies could be moved anywhere by M. T. When a full day's march of 15 miles can be covered in M. T. in $\frac{3}{4}$ hour or an hour's march in 10 minutes, it would seem foolish to walk.

Very careful organisation to prevent congestion and blocks will certainly be necessary, but in England now, every newly joined recruit controls traffic, every street urchin signals one round a corner. At the Aldershot Tattoo with perfect organisation and known routes, 70,000 people are cleared in one and a half hours. In the back areas M. T. would very quickly clear a block.

Such are but a few of the ideas which one hears discussed and there are different points of view to all these questions. The more they are discussed the better. In time no doubt, by means of conferences and staff exercises of General Staffs, Staff Colleges and other schools of thought, some settled doctrine and fixed ideas and organisations will be arrived at.

SOME REGRETTABLE INCIDENTS ON THE N.-W. F.

BY LT.-COL. O. D. BENNETT, 2/15TH PUNJAB REGIMENT.

The object of this article is largely to provoke a discussion as to whether minor tactics on the North-West Frontier of India have undergone any radical change in the past dozen years, or whether they are much the same as they were before the 1919 campaign; and, further, to bring into prominence the inherent difference in tactics which the Trans-Frontier Tribesman forces us to adopt when taking him on in his own country.

It is suggested here that most of the tragedies which have happened on the Frontier in the past were due to ignoring this point, and that the majority could have been avoided by more careful elementary training. It is hoped to prove from examples given below that such "regrettable incidents" are unnecessary and need not be allowed to happen. Further, it is intended to show that they can be ascribed partly to the neglect of the two principles of war, "Surprise" and "Security", and partly to the misapplication of that para. in Infantry Training, Vol. II, which says: "The *bedrock* of infantry tactics is the combination of fire and movement." This is strong language for one of our sober training manuals, but this article is written in the hope of demonstrating that it is difficult to make the wording strong enough in the case of Frontier Warfare to which it applies in a special degree, and that any misapplication of this "bedrock of infantry tactics", must have fatal results.

The two principles of war in which we are chiefly interested here are "Surprise" and "Security", and the neglect of both of these is illustrated in each of the incidents related below—incidents in which valuable lives were lost needlessly and uselessly.

When dealing with principles of war it is sometimes useful to remember the opinion of a certain senior officer at a conference three or four years ago that "Principles of war are merely common-sense." This simple definition must have brought comfort to many, and it applies peculiarly to fighting on the N.-W. F. where common-sense plays a leading part. If one essays to define the above principles of war more precisely, little difficulty will be found in the case of

"Surprise" which is self-explanatory. It is an easy one to understand and the man we have to deal with across the Border is an adept at its application; in fact surprise lies at the back of all his *coups*.

On the other hand, the best antidote to "Surprise" is the principle of "Security", and it is intended to show later on that it is the neglect of this principle of security in the first place, coupled with a lack of what may be called "counter-surprise", which is at the bottom of our troubles. To define this "security" is less easy; it is perhaps the most contradictory of all principles of war. By "security" in Frontier warfare does one mean, for instance, the construction of a number of mud forts in Tribal territory and sitting fast inside them?

However plausible this may sound, it is a reduction of the principle to absurdity.

The Manual of Operations on the N.-W. F. of India has the following sentence printed in black type—

"A vigorous offensive, strategical as well as practical, is always the safest method of conducting operations, and no one will deny that to do any good against the Trans-Border man, one has to go after him and hit him as hard and as often as possible. If, however, whilst carrying this out one does not make oneself secure against surprise, it will mean yet another regrettable incident.

It is suggested that the correct and common-sense use of ground by the regimental officer and N. C. O. and section commander will give us one solution to the above problem. By that is meant that our junior leaders must be taught to make use of the ground in such a way as to neutralise the tactics peculiar to the Tribesman. Though principles of war do not change, tactics, as is well-known, vary in every war in accordance with the characteristics and armament of the enemy and the type of ground over which we have to fight.

The characteristics of the Pathan are now so well-known that it seems almost superfluous to describe them. Every one has read of his wiles and stratagems, and of his unending patience in waiting for his opportunity to strike. He has rightly been described as the "World's Best Umpire" who, when he sees a tactical mistake being perpetrated and repeated, puts the offenders permanently out of action usually without any loss to himself. On the other hand we have also the well known fact that the Tribesman, be he Mahsud or Afridi, Wazir or Mohmand, has no liking for taking on our troops when the

chances are even ; they must be heavily in his favour or he will not risk his security. To get these odds on himself he will be watching every unit that comes up the line, observing carefully its method of piquetting, and marking from afar each piquet as it takes up its position, with a sharp lookout for bad use of ground or carelessness ; these he will presently turn to his own advantage and to our undoing. A week (or a month) spent in watching the same glaring mistake being made daily sees his plan cut and dried, and then he turns it into a dead certainty by striking hard, quick and without warning, exploiting to the full the principle of Surprise. From every Frontier tragedy there is a lesson to be learnt, for in most of these incidents there will be found some fatal mistake which was the direct cause of it.....not through any superiority of the enemy over our troops in either courage or armament, but due rather to the incorrect application and combination of fire and movement on our part ; in a nutshell, faulty training in the use of ground.

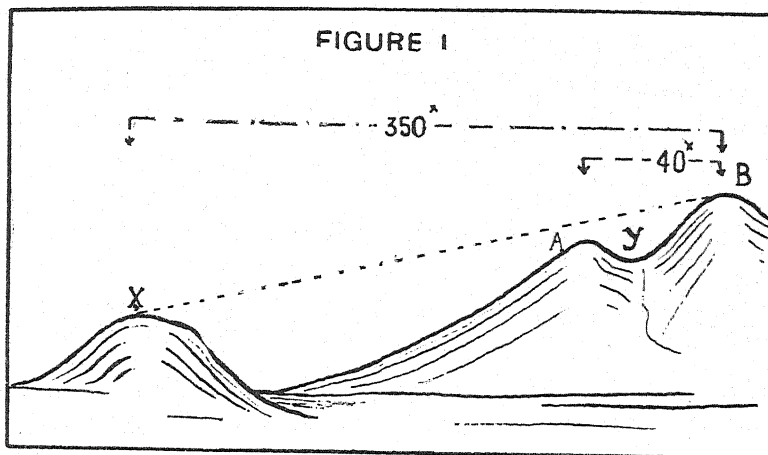
This combination of fire and movement, this " bedrock of infantry tactics," seems to come naturally to the Trans-Border man and is well understood by him as especially suited to his own country. Though our troops may be equally well-trained in the civilised warfare version of fire and movement, until this is adapted correctly to suit the tactics peculiar to the Tribesman, these incidents will continue. It is indeed due to the non-recognition in the past of the inherent differences in this respect between the two forms of warfare that we owe the majority of our troubles. In vain do we turn to our training manuals ; they deal with the subject on too broad a scale to be of assistance. The solution to the problem can best be found by studying the mistakes of our less fortunate brethren and discovering what the fundamental error was which led to their destruction. Our training should then incorporate the necessary correctives.

The following four incidents are produced as being typical of the past ; they apply equally well to the present, and contain perhaps some useful lessons in elementary Frontier tactics :—

Example 1.

This example illustrates the violation of two principles of war, viz., " Security " and " Surprise " by a road-piquetting party in Waziristan, a fact which was noted and acted upon by a party of Wazirs who had been watching unseen for several weeks.

The point to be piquetted was a double-headed hill as illustrated in Fig. 1. (not drawn to scale). " B " was the point to be piquetted. Distances " X " to " B " about 350 yards; " A " to " B " about 40 yards.



The senior N.-C. O., dropped his L. G. section near the foot of the hill at point " X ", from where it could bring covering fire to bear on both point " A " and point " B ". He then advanced with his remaining section up the hill, well extended. He arrived at " A " with his section without incident, where his party took up a firing position, each man alert, behind cover and ready for trouble. There was nothing to be seen and, after a look round, he gave the word to advance to point " B ", secure in the knowledge that his L. G. section was still planted out down below watching point " B " like lynxes and ready to open instantaneous fire. Not at all a bad scheme, one would say, at first sight, and quite well thought out and efficiently carried out.

What happened? He gave the order to advance, and when his party got to point " Y ", a volley fired at short range from the right flank knocked out every man. This was followed by a rush from the left by the enemy " knife party ", covered by their own riflemen; the wounded were quickly finished off and the gang disappeared with their loot of rifles and ammunition.

It may be asked what was the L. G. section at the foot of the hill doing in the mean time. The point is what could they do? They had heard the sudden volley, and the howling of the enemy, and then dead silence. They did the best they could, rushed up the hill and found their comrades lying dead with their throats cut and all their rifles and ammunition gone. All was once more peace and quietness.

Now, what were the mistakes the Tribesmen had noticed which caused them to lay the ambush, and furthermore enabled them to get away with it successfully without a single casualty to themselves? They are fairly obvious, but what company commander would guarantee that no N.-C. O. in his company would have fallen into the same trap?

To take the principle of "Security" first. Our friends had arranged for their covering fire correctly; they were too well trained to omit that. But the party at "A" did not seem to realise that the moment they advanced into the dip at "Y," they dropped out of sight of their L. G. section at "X", and therefore to all intents and purposes had no covering fire.

Had it been civilised warfare against a civilised enemy, it must be conceded that the dispositions made by the piquetting party were excellent. But for Frontier warfare it was a case of "fire and movement" misapplied—a case of faulty use of ground. If the leading section on arriving at "A" had stopped there in its firing positions and, instead of making any further advance themselves, had signalled to the other section to leap-frog through them, and had then covered them over those fatal 40 or 50 yards, nothing at all would have happened. The enemy would at once have realised that the game was up and would have quietly vanished. In the way they had it worked out there was no risk at all to themselves, but any variation in the tactics of the piquet would have spoilt their plans.

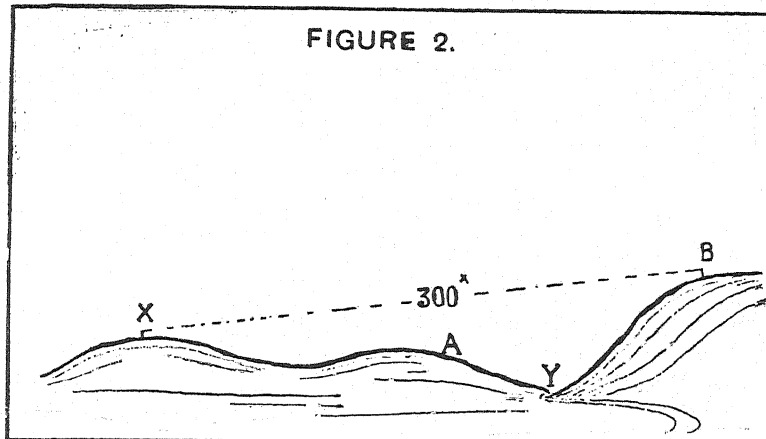
Here we see, therefore, the principle of security flouted and common-sense violated, for it cannot be called common-sense to lose sight of one's covering fire and get hidden away in dead ground out of sight of one's covering party. Training should eliminate such a mistake by insisting upon the length of bounds being cut down so that every forward party halts automatically the moment it finds itself about to disappear from view.

The worst and most elementary error in this incident has still to be mentioned. The principle of surprise was broken by the ignoring of the old frontier "chestnut" of never going over the same ground in the same way twice in succession. If that hill had been tackled one day from one side, the next day up a different spur, the third day from the reverse side having walked right past it, and so on, the principle of surprise would have been observed and the gang would have been kept guessing, and possibly the tables turned on them.

Though the above incident occurred some 15 years ago, there can be little doubt that the lessons to be learnt from it are as fully applicable at the present day as they were then. They are lessons which will not be found in any book but which should be taught in every battalion. From occurrences which can be seen on hill parades it is doubtful whether that is always the case.

Example 2.

Figure 2 shows ground which is typical of any part of the Frontier, viz., a flat stony piece of ground "X"—"A"; beyond it the hill "B" to be piquetted, and between the two, but invisible from point "X", is the nullah "Y", which cannot be seen until one is right on top of it.

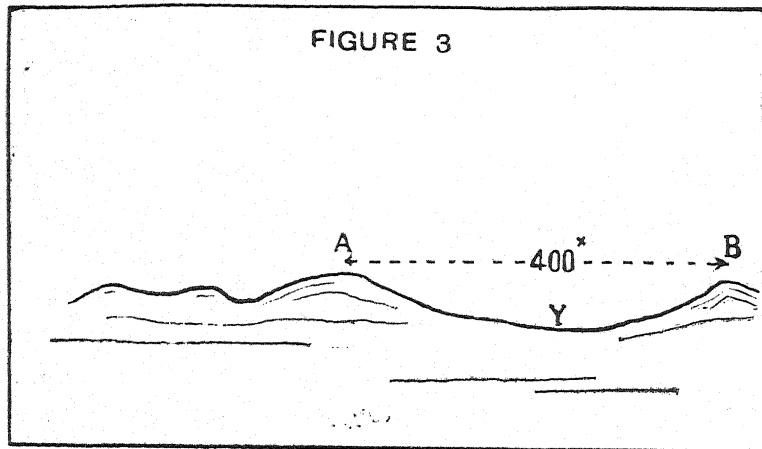


In this episode the senior N.-C. O., was at point "X" with his L. G. section and gave point "B" as the objective of his other section. In accordance with his orders the section commander of the forward section endeavoured to get through to point "B" in one bound, and got wiped out with his section in the nullah "Y" at the foot of the hill where they were lost to sight from their covering fire party. In this case it is of importance to place the blame for the affair on the proper shoulders. The senior N.-C. O. at "X" was blameless, as he could not be expected to cater for ground which he could not see. The N.-C. O. of the forward section alone was responsible for his own death and for that of his command. He should have halted the moment he was aware of the nullah, and the signal should have been passed back for the rear section to advance. The importance, therefore, of even the most junior Lance-Naik being properly trained in the use of ground is self-evident—otherwise he is a danger and a menace.

This incident also dates back some 15 years, but the lesson applies equally well at the present day. It is the fashion now to arrange for covering fire by Machine Guns, but all the M. Gs. of a battalion could not have prevented either of the above two tragic events. M. Gs. cannot perform the miracle of saving from local ambush forward elements who disappear from view into dead ground.

Example 3.

A platoon was working across country in the vicinity of the road BANNU-MIRANSHAH searching for a gang of Wazirs which had been harrying our convoys. The Wazirs had evidently been watching them unseen, studying their methods, and must have noticed the same type of mistake reoccurring. They chose a long shallow depression or "sunken plateau" ("A"—"B") some 400 yards in length for the site of their ambush (figure 3).

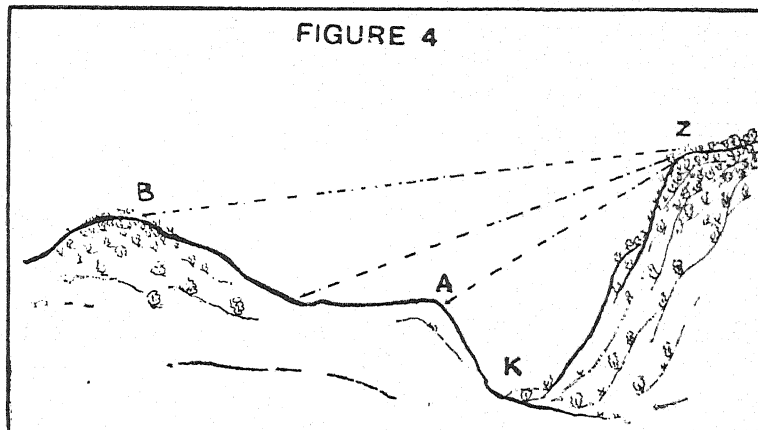


The platoon had been advancing by bounds in the proper way, and when it reached the near lip of the depression at point "A," one section was dropped to give covering fire to the rest of the platoon whilst the latter was making for the further side "B". When the forward sections had got to point "Y" in the middle of the sunken plateau, the N.-C. O. at "A" thinking (perhaps) he was being left too far behind, gave his section orders to advance. Presently therefore when the whole platoon (in two parts) was moving across the hollow, a hurricane-fire broke out from the flank-edges and the whole party was wiped out. A rescue party arrived some hours later to find one survivor of the massacre lying under a heap of dead where he had been overlooked by the gang.

Here the unpardonable crime was committed of the covering fire party neglecting its duties with the inevitable results. Had that platoon been properly trained in "fire and movement" and in the correct use of ground that particular ambush would not have been staged. In all probability the N.-C. O. in question was well versed in the theory of fire and movement for civilised warfare, but its correct application for frontier fighting had either not been properly taught or it had not been fully digested. The similarity of this case to jungle warfare is somewhat striking, where clearings are avoided until the edges have been secured—a common-sense measure.

So far, we have confined ourselves to cases in which N.-C. Os. only were to blame for the destruction of their command. In Example 4 is given an illustration of misuse of ground by a company commander which led to unnecessary casualties and might well have resulted in a major disaster.

A company was detailed as a part of the covering troops to a brigade employed in the burning of a Mahsud village, and was given a long thickly-wooded ridge to hold (ridge "B" in Figure 4). The forward slopes of this ridge were bare of all scrub and cover, falling away gently to point "A", from where they descended steeply into a deep nullah "K" which was out of sight from ridge "B".



The Company Commander knowing that it was vital that no enemy should be allowed to collect in nullah "K" from which they could emerge to harry him in his retirement, sent a small piquet forward to point "A" where it could overlook the nullah and effectually prevent any enemy lying up in it unseen. At first sight this would seem a sound plan.

All went well until the signal for the retirement was received ; the day had passed quietly and there had been no sign of an enemy. But the " Best Umpires in the World " had been on the watch, had spotted unsound use of ground and had perfected their arrangements to punish the offenders.

The moment the forward piquet at Point " A " began to retire, a heavy and accurate fire was opened by unseen marksmen hidden in the thick scrub that covered Hill " Z " which took toll of every man who showed himself. The first few men were knocked out in the open slope between Points " A " and " B ", and gallant efforts to rescue the wounded merely increased the number of casualties. A heavy covering fire of L. Gs., and rifles was organised by the remainder of the company on Ridge " B " to help their people back from " A ", but the enemy were entirely invisible and their fire continued undiminished in both volume and accuracy.

So there the whole company remained pinned to its ground, unable to retire or move forward. The Brigade could do nothing to help them as it was getting dark and it had to get back to camp, and there was nothing for it but to leave the Company out all night to its own resources at a height of about 7,000 feet without bedding and with a number of dead and wounded on their hands. Fortunately no attack was made on them during the night, and when they were rescued half-frozen the next morning without further losses, the general opinion was that they had got off luckily.

The sole reason for this unpleasant affair was once more the wrong use of ground—dispositions which were faulty in their relation to Tribal tactics. It was a case of sound teaching misapplied. In endeavouring to obtain greater safety, security was sacrificed. That forward slope should have been avoided like a plague-spot. Common-sense should come to the rescue and prevent one from pushing down forward slopes unless one can make sure of a safe line of retirement. On the other hand the nullah had to be watched as it was vital to keep the enemy out of it. Probably some system of patrolling would have offered the correct solution.

Though the above episode occurred less than ten years ago and must have been taken to heart at the time, there is little evidence that the lesson regarding the danger of forward slopes in Mountain Warfare has been handed on. In the average hill-parade forward slopes still

seem to exercise a fatal fascination for many a L. G. section commander and not a few platoon commanders, in spite of the fact that such slopes infringe the two principles of "Security" and "Surprise".

Summary.

From the analysis of the above episodes, the following points stand out clear.

1. All these incidents are examples of elementary tactics gone wrong ; they were therefore avoidable and should not have happened. Yet, it may be added, the mistakes which caused these tragedies can, at the present day, be seen being repeated on any mountain warfare training. There seems little doubt, too, that in spite of the passage of time most of the old lessons hold good at the present moment notwithstanding the march of science and the improvements in weapons of war. Why should the art, simple as it is, of applying elementary tactics correctly to suit the peculiarities of frontier fighting have remained at a stand-still when so great a proportion of the Army in India is stationed in surroundings which are ideal for the purpose ? The necessity of developing an eye for country from the savage enemy's point of view requires emphasis. We have to look at the ground from a different angle, or, perhaps, a more acute angle than we use in civilised warfare so that the traps and pitfalls may be recognised instinctively and the right antidote applied in the shape of correct use of ground and combination of fire and movement. Our junior leaders and our men must be taught to bring common-sense into play and to realise that covering fire can be of no value to anyone who drops out of its sight. Forward sections must be trained to halt and take up firing positions the moment they see that they are about to disappear into dead ground, and to signal to their covering fire party to advance and leap-frog through them until they in their turn are compelled to halt for the same reason.

All this may be termed the "A B C" of mountain warfare tactics and seems hardly to require emphasis, but it would be a rash man who would be prepared to guarantee that none of his own section commanders would fall into any of the first three "traps" quoted above.

If this is the case can it be said that all is as it should be ?

(2) A useful method of driving home the required points would be to stage demonstrations on suitable ground to illustrate some of the

"regrettable incidents" which have actually happened in the past, and to show how the tragedy could and should have been averted. Ground suitable for this purpose can be found during company or battalion training in most parts of India ; much can also be learnt on a large scale sand-model built up in any small nullah adjacent to the Lines to represent typical N.-W. F. country.

(3) Fire and movement as used in civilised warfare require considerable modification and decentralisation when fighting against a savage enemy on the Frontier. It is to be questioned whether our Individual and Platoon Training in Mountain Warfare descend sufficiently deep into details to cover these points in elementary Frontier tactics—points which every budding N.-C. O. must learn and digest thoroughly if he is not to remain a menace and a danger to his small command.

THE TRAVELS OF RISALDAR SHAHZAD MIR KHAN.

PART IV.

And now to continue my story. Eight days after Captain Wellby Sahib had left for England I managed to pack all our servants and kit into a ship bound for Aden. When we neared Aden the ship was put into quarantine, but as I had letters for General Currie, and also for the Consul, Colonel Jacob, the doctor Sahib let me go ashore. I landed and gave the letter to Colonel Jacob, who told me that he had just received orders that I was to go to England.

I asked him what on earth I should do in England. He told me that Wellby Sahib Bahadur had sent me a cable, to which I replied that I had come out on the understanding that I should go to Africa for survey work for one year only, and that having already completed three months over the time, there was no reason why I should go on to England. I told him, moreover, that Captain Wellby had not been very pleased with me of late and so I flatly refused to go.

To this Colonel Jacob merely replied that it was no concern of his; there were my orders, I would have to go, and that was the end of it.

At this I was very annoyed, but there was nothing for it, and I had to be content with asking him to send a cable to the effect that as I could hope for no possible gain out of the venture, I wished Wellby Sahib would spare me the trouble of the journey, and wreak his vengeance on me here in Aden.

Then I set about sending off to their homes the Abyssinians and Somalis whose numbers had now dwindled from fifty-five to thirty-five, and I handed over to the authorities in Aden all our kit and arms. I had a fortnight of idleness, so one day I went to see the Aden Troop which consists of 50 men and horses and as many camel sowers, the latter belonging to Shaikh Osman, an Arab Chieftain.

On my way back I was met by a red-coated orderly, who told me that a Sahib had sent for me. I went along with him in a cart to a shop belonging to a Hindu where I found an Englishman. He came out and shook hands with me asking me how I was. I was astonished, for I had never seen him before, and yet he seemed to know me, and

I began to feel rather awkward. Still holding my hand, he asked me to come along for a trip in his boat which was lying close in shore ; an invitation I gladly accepted. The crew had obviously had previous orders, for as soon as I was aboard they pulled away as hard as they could in the direction of a large ship which was lying some distance out, which he asked me if I would like to go over. Up to that time I had thought that the Sahib was merely taking me out for a cruise, but when I got on board the large ship and saw all my luggage which I had left for safe custody in a Hindu's shop in Aden, I realised that I had been had for a mug. What is the good, I thought, of fighting a British Officer like Captain Wellby ? and I may, after all, reap some benefit from going to England, the Land of Kings.

My Journey to England.

We left Aden in a ship called the ' Mombassa, ' and we saw in mid-ocean several towers from which at night shone red and white lights to assist navigation. There are some very big guns in Fort Malyon which will prevent any foreign ships entering the Red Sea without the permission of the British.

On the 20th September we entered the Suez Canal, which was originally made by the French, who still collect Canal dues at Port Said. The Canal is about 60 yards wide and some 80 miles long. It is too narrow for two large ships to pass each other, and so the East bound ship has to wait until the one going Westwards has passed through ; on this occasion the former remained at anchor for 24 hours in Port Said. It takes ten hours to go through the Canal.

Port Said is a fine city, which nominally belongs to Egypt, but actually everything is in the hands of the British.

At two o'clock in the afternoon of the 21st September the ship left for Naples, and for the next two days we went due West. On the 24th we passed through the Straits of Messina with high hills on both sides, and this is the beginning of Europe. One day I saw far off a cloud of smoke rising from the summit of a hill. I asked a fellow passenger how it was that this smoke was rising straight up to heaven, and he pulled my leg, and answered, " That is the front door of Hell, and that is the smoke rising up from Hell itself ! " Later he told me it was a volcano that had been active for some thirteen or fourteen hundred years, and that no one could go near its mouth as it was too hot. He

also told me that the fire was in the bowels of the earth, and that from time to time whole villages and towns had been buried by an eruption.

Some distance to the South of the hill lies the city of Naples, a very famous town of Italy.

When we arrived here I asked the Captain of the ship for permission to go ashore, and so to set foot in Europe for the first time. The Captain asked an Italian official to send a gendarme with me to show me round the town, and bring me back safe and sound to the ship. I was not long in experiencing Italian perfidy, for the boatman who plied for hire between the ship and the shore charged me three shillings for a ticket, whereas he gave a fellow countryman a ticket for three pence. When I questioned this difference in charges, he said that the fare for important people like myself was three shillings, whereas ordinary people like my companion could do the journey for three pence.

I replied that I was but a foreign soldier, whereas the Italian was apparently a well-to-do merchant. However I soon realised that argument was useless, and that in Italy there was one law for the foreigner and another for the Italian.

We landed and my gendarme took me off to a sort of Museum where I saw a box containing the clothes and skeleton of one of the former inhabitants. He told me that it was the corpse of a General who had fought the King of Naples. As I was going out, a man standing in the doorway stopped me and said I should have to pay two shillings for each of us; which sum I paid, as I was too shy to refuse. The gendarme then took me to another place where I saw a large lump of iron embedded in a big wooden door. I was told that in olden days the Italian fleet had bombarded Naples, and that a cannon ball had embedded itself in this door. Here again I had to pay out two shillings. After this I told the gendarme that I only wanted to go round the shops and that he was not to show me any more sights. He assured me that Naples was a very large city, and thereupon hired a two-horsed cab, on the box of which he seated himself, and told me to get inside. We had only gone a short way when he stopped at a fruit shop and demanded some grapes for which I had to pay a shilling.

He then drove on a considerable distance and stopped at a house, the nature of which I was easily able to recognise by a face; I saw at the

window. I told him that nothing on earth would induce me to go inside, but he grew insistent and told me that the place was well worth seeing. I then thought that I had only been making a fool of myself, and that the best thing I could do was to go straight back to the ship. This I did, and on arrival at the quay, paid the cabman three shillings. On reckoning up I found that I had spent nine shillings with nothing to show for it. The gendarme then asked for a tip, and in order to keep him quiet, I told him I would give him something when we got on board. He refused to come on board, but I insisted on taking him with me and off we started, he in front, and I behind, threatening to throw him into the sea for the way in which he had treated me. At this he bolted, and though I chased him for a long way I did not manage to catch him.

My own experience is that the immorality in Italy is worse than in any country in the world.

The Italians are an undersized lot of scoundrels, and it is quite obvious why they were beaten by the Abyssinians in Africa.

Few people seem to live in Naples, and the men I saw were small and weak little shopkeepers, whilst the women are utterly shameless. In ancient times Italy was a very great country, and the Italians a fine warlike race ; but now-a-days they are not worth a damn.

When I got on board, I told the gendarme official that the man he had sent with me had given me a fine time, and had made me waste my money for nothing. He assured me that the man would be punished, but I knew full well that they were all hand in glove with one another ; for as we say :—‘ Alai, Gulai is one and the same shop.’

From Naples to England it is possible to travel by rail, but we went round by sea to Marseilles, that fine and well known city of France, all the buildings of which are seven stories high, and which appeared to me to be bigger than any buildings I ever saw in England.

Down the middle of the bazaars are streets for the horse traffic, and on both sides are pavements for pedestrians.

One evening at about five o'clock I went to see the bazaar, and there was such a crowd of people in the streets that I could barely make my way along the pavement, and had to turn up a side street.

The French policemen wear red trousers, black coats, and hats like those of Eurasian railway officials in India.

Two such gendarmes saw me and accosted me in Arabic, inviting me to come along with them and take my ease in a cafe nearby. So I and the ship's steward, who was with me, went with them. They offered us drinks, but I refused, though my companion they persuaded to drink with them. They treated us with great kindness.

These police, whenever they go on duty, take with them a leather bag with enough money for three days food. They are all fat and sleek, and cannot bear to be without food for long. Their women too are positively obese, which shows how true our proverb is that "A fat and lusty man marries a buffalo." The climate of the country is very good, which makes everything fat, even the chickens, while the horses are gross.

I have heard the following about the kingdom of France, that in former times they had a King, who was just as wicked and cruel as Muhammad Ali of Egypt.

Exasperated by this reign of tyranny, an unimportant French officer made himself a General, and eventually turned out the King of France.

He then became so important that he was able to make war with the Germans, whom he brought to their knees. However, the British came to the assistance of the Germans, and captured this French upstart and adventurer whom they imprisoned.

From that date France has been a Republic. A man is selected by their Parliament to be King for seven years, after which he goes on pension.

Nevertheless the administration of France appears to be good, except for the fact that they seem to be having continual rows in their Parliament, and from what I saw of them, I came to the conclusion that the people themselves were by nature quarrelsome.

The greatest difference that I have noticed between the French and the British is that whereas an Englishman will work hard for a rise in pay, a Frenchman is so lazy that he will gladly accept less pay to save himself trouble. They always appear to be hostile to the British, but I don't know if the Germans are behind this or whether there is some other reason.

When our ship, the 'Mombassa,' was anchored alongside the quay at Marseilles a French ship came along and told us to weigh anchor, and move off to make room for a French ship. Our Captain refused to

do so, whereupon the Frenchmen proceeded to cut the hawsers of our anchors with axes. Our English sailors, by way of retaliation, took a large bundle of silk handkerchiefs off a pedlar on the quay, and ran up the gangway with it just as the ship was moving off, and thus got something in exchange for the hawsers. In swindling and fraud the French are second only to the Italians.

They have two varieties of every article, one bad, which they sell, and the other good, which they keep for themselves.

In Marseilles harbour there is a bridge some two hundred and fifty yards long, stretching over an arm of the sea, through which all in-coming and out-going vessels have to pass. The bridge parts in the centre, the two arms lifting to let maritime traffic pass, afterwards reclosing to form a road over which any vehicle and even artillery can pass in safety. The entire bridge is made of iron and must weigh thousands of tons, and yet the machinery is controlled by a single man by means of a screw or some such thing.

We left Marseilles on the 30th, and for the next two days we saw on our right flank low hills of a reddish colour which looked utterly barren. This country was Spain, an independent kingdom. Further west was the rock of Gibraltar, a very strong naval fortress belonging to the British, although the land itself belongs to Spain. The British are the greatest naval power in the world and you will see their fortresses on every shore. By now I had travelled twelve hours by the clock, that is to say, when it is evening in Peking it is morning in London; and in all that distance all the fortresses worthy of note commanding the seas were British. From Gibraltar one goes north-west, soon turning due north. I believe the distance from Tientsin to London is 12,000 miles.

On the 6th September, 1899, I arrived at the Port of London. The Captain would not let me go ashore, but when everybody else had disembarked three men came aboard, and I learnt that one of them was Wellby Sahib's father, the second his brother, and the third a sergeant, who was wearing full dress. From these gentlemen I learnt that Captain Wellby Sahib had left with his regiment for South Africa on the 3rd of September, which was a terrible disappointment to me. However, his father and brother treated me very well, and gave the pensioned sergeant ten rupees a day to look after me, and to me personally they gave as much money as I wanted to spend. Every day the sergeant was given orders as to what he should take me to.

Wellby Sahib was of a very good family and had a beautiful house. He was a Major in Parliament and owned several goldsmith's shops. His two brothers were very good-looking. When I left his father gave me a beautiful sword and a very fine watch and many other smaller presents, as well as my travelling expenses both ways, whilst the ticket from Bombay to London alone cost six hundred rupees. It was entirely thanks to Captain Wellby Sahib that I was able to see Europe and London, which is the most wonderful thing to see in the world. For although one may have travelled all over the world, no one thinks anything of it unless one has been to England. To start off with I felt very out of it and home sick, but in a few days time, when I got to know English fairly well, and had experienced the hospitality of the English, I lost all my shyness and enjoyed myself immensely.

Any class of Englishman I met, would invariably greet me with, "Come on, and have a drink!" i.e., of wine or soda water. I always flatly refused to drink wine, but smoked cigarettes, and drunk soda water all day long.

The four essential qualifications for anyone who wishes to go to England are:—Firstly, to be able to speak and understand English well; secondly, to be able to drink wine and lots of it; thirdly, to be ready to eat anything that is put before him; and lastly to be very well turned out, and to have plenty of money.

The Wonders of England.

The British Museum.—Here in a Museum are to be seen the corpses of Egyptians who lived more than two thousand years ago. Their coffins are painted and decorated to look just like idols. The corpses look quite ordinary and just like us.

The Underground Railway.—There is a railway which goes under both land and sea. One day the Sergeant said to me, "Let's go to our destination by rail." So off we went, and he bought the tickets. We then went and sat down in a small room, on three sides of which there were benches. I suggested to the Sergeant that we should go along to the station, but he replied that we were in the station. Somewhat mystified, I remarked that I couldn't see any railway, and he said we were coming to that. After a while, the whole station sank into the ground, and eventually descended to a platform, where I saw an Underground Railway. A train soon came in, and we got into it.

Before the train arrived at any station the name of that station appeared in every carriage. We passed through several stations, and then the Sergeant told me that we were going under the sea! They call this railway the 'Empress Railway.'

The Tower of London.—Here are kept the crowns of the Kings and Queens of England. The crown of the reigning Sovereign is kept on the top shelf, and all the others are kept below it.

These crowns are studded with beautiful jewels, though the crowns of the former Sovereigns do not appear to be as good as that of the present Queen. In 1899, when I was in London, Queen Victoria's crown was on the top shelf.

In the Tower are statues of the warriors and horses of times gone by. The men are dressed in armour from head to foot, and the horses too are covered in armour, even to steel knee-caps.

The Royal Palaces.—One of these is in London, and in front of the gate is a bronze statue of Sir Albert, who died when he was thirty-five years old. He was the husband of Queen Victoria.

Another palace is situated inside an old fort built on a small hill at Windsor. Here are collected the various presents that have been given to former Kings and Queens, such as gold caskets of all sizes and shapes, and elephants' tusks bound round with gold. Here I saw the Riding School in which the Royal Princes and Princesses are taught to ride. To the East of the Fort is a very large park in which roam deer, cattle, and stags with large horns. As I was coming from Windsor, I saw to the West of the Fort the Royal Chapel where all the Royal Princes are buried.

Madame Tussauds.—The Sergeant took me to this place one day where one sees figures of men and women all made of wax.

They were so lifelike that I was amazed, and stared at the figure of an Englishman who was writing something in a note book in front of one of the groups. He really was most realistic. To my utter astonishment, presently the 'figure' got up and walked away! I felt that I had made rather a fool of myself. After that I scrutinised the figures very carefully, and went right up close to them. I was very impressed with the figure of a Russian Sergeant which was really wonderful. No one could possibly tell that it was not a real live man.

The Royal Military College.—One day, Wellby Sahib's brother took me to see the Royal Military College, which is the school in which

young Sahibs are turned into officers. He told the Cadets that I was a very famous traveller, and added that they must have heard of me and my adventures. To this they all replied that they had seen my name and photograph in many books of travel.

They had arranged a tea party for me at which many of the Cadets were present. They told me that they had recognised me straight-away from the photographs they had seen.

The Sahib then told them all about me, where my home was and so on and so forth; and the Cadets asked me to say a few words myself. Thereupon I made a short speech in English at the end of which they all applauded loudly. They were given a holiday that day in honour of my visit. Their master seemed quite a capable fellow.

Penny-in-the-Slot Machines.—One day I saw a sort of iron column that might have been an idol. A bystander told me that if I wanted some sweets or tobacco, all I had to do was to put an anna into the pillar and that I would get what I wanted. This I did and the first time I got some sweets, and the second time some tobacco.

I put an anna into another machine and saw a horse race—a very wonderful thing as there was nobody near to make the machine work.

The Alhambra.—(*Crystal Palace*?) is the name of a place where they have displays of fireworks; indeed one might call it 'The Home of Magic.' For above one is the building itself which is wonderful, and below are the fireworks which are beyond all description. I saw a man whose limbs were all of fire, swinging on a swing of fire, which was suspended by ropes of fire! Then they let off rockets high up into the sky and from them descended stars of various colours. The whole place was illuminated with red, white and blue glass lanterns.

A Nautch in England.—This is an amazing form of amusement, for a band plays all the time and as many as thirty or forty women will dance, at times in sections, then in half sections; they will change front, wheel about, and then saucily form line to the front! They will sing every song and love song that has ever been written. At the end of the dance they will do a little acting. I saw one dancing girl jump up and down on an india-rubber bed, jumping higher and higher till she must have been jumping thirty or forty feet! The building in which they hold the nautches is very fine. It is like an amphitheatre roofed in with a large dome, and all the spectators can see the dancing perfectly.

The Woolwich Arsenal.—Outside London there are some workshops in which they manufacture guns which are fifteen yards long, and of a calibre equal to a man's girth measured round the navel. I can't exactly remember what the projectiles weighed, but they can't have been less than 20 maunds (1,600 lbs.).

I asked in wonder how on earth they ever managed to take these guns away; and the man in charge of the workshops pointed to a railway which ran along the roof. He told me that the gun was affixed to an engine by a hook, and that it was transported straightaway to the man-o-war for which it was destined. I was allowed to fire one of these huge guns twice, but only a shalloon bag of black powder; anyhow the noise of the explosion was so terrific that I was sure that the whole gun had burst! I was told in the barracks afterwards that if a fort were bombarded with these guns it would be blown to smithereens. I also saw the great steam hammer with which they make these guns, which must have weighed one or two thousand maunds. Yet it is worked by one man only, and if you put your hand underneath, they will let it drop so that you will feel the pressure of the air, but the hammer does not touch you! The British always keep two men-o-war to every one owned by any other foreign power, and for this reason Britain is Mistress of the seas.

The Guards.—I was taken round the lines of the Queen's Guards, both Cavalry and Infantry; and then saw them on parade. The Cavalry wear steel helmets, and steel armour on their bodies. The Infantry wear large bearskin hats. They are fine upstanding, good looking young men.

The Arts and Crafts.—The artisans in London are really wonderful. All you have to do is to give them a description of anything you wish made, and they will make it exactly as you have described.

There are people in England who are poor in comparison with other people in England, but not in comparison with the people of other countries; for here a workman gets four shillings, the equivalent of three rupees a day, besides which he gets housed and fed! Of an evening you will see them walking about in the bazaars and streets just like Sahibs.

I have heard it said that they get a lot of money from charitable institutions as well. Verily the English get more pay than any other people in the world; but it is also true to say that England is the most expensive country in the world.

The Houses of Parliament.—In England, or rather in London, all legislation is run by a jirgah. In the jirgah, which they call 'Parliament,' there are 670 members. Of these 350 are great Lords, real Sahibs, and gentlemen; and the remainder are ordinary common people, shopkeepers, labourers, and their ilk. Decisions are made by a system of tickets or votes, so that when the majority of the members give their tickets to a proposal, it becomes law. If there should be an even number of tickets on both sides, the Chief Wazir or Prime Minister has the deciding vote.

During the three or four months of the jirgah's session in which it frames new laws, twenty-eight servants are kept to look after the house, sweep it out, and keep it clean.

When the Sovereign dies, the jirgah resigns as a mark of respect, and then the new King graciously permits them to resume their sittings. Thanks to this jirgah the Sovereign has no work to do at all, which is just as it should be. Indeed this jirgah is of the greatest use to the Sovereign, and perhaps to the country as well.

The people in England would often ask me what was the most wonderful thing I had seen, and I would always reply that the thing that astonished me most was how a great people like the English ever came to hear of a wretched country like India, which is at the Back of Beyond, leave alone to go and live there. Eventually I came to understand that England is but a small island and has always depended for her existence on the sea. So the British had to develop their sea power, and their ships sailed the seas and took possession of whatever lands they came upon, till eventually they had practically the whole world at their mercy.

I left London in the P. & O. Victoria. After touching at Marseilles and Naples we reached Port Said, where we took on board some twenty boxes of specie—pounds, etc.,—. Again at Suez and Aden we took boxes of money on board, in the latter case being the cost of the transport of goods for Australia.

Then I realised that railways and shipping are the King and Queen of Commerce; and although they must have entailed considerable initial outlay, they will eventually take the money of the whole world to England.

IMPERIAL AIR ROUTES.

BY MAJOR A. E. W. SALT, M.A., A.E.C.

An Imperial Air Route is an air line with a regular service, the termini of which are within the British Empire. If the line is of sufficient length, it will of necessity be equipped with landing grounds at regular intervals and will possess an organised system of bases for refuelling and repairs.

If this definition is accepted, it will comprise not only the long air routes controlled and operated by Imperial Airways, *i.e.*, the route from Croydon to Karachi—the India Air Route—and the route from Croydon to Capetown—the Africa Air Route—but also shorter air routes in other parts of the Empire, *e.g.*, those of Canada, Australia, India and the African colonies.

This definition should also remove the confusion that still exists between Imperial Airways—the principal organisation concerned with Imperial air routes operating from Great Britain and Imperial Air Routes in general.

Imperial Airways is a subsidised company formed in 1924 by the combination of four smaller companies. It is now responsible not only for two Imperial air routes but for organised cross-channel services to Belgium, Holland, Germany and France. It has foreign cross-channel rivals in the French "Air Union," the Belgian "Sabena," the Dutch Koninglijke Luchtvaart Maatschaapij (K. L. M.) and the German Luft Hansa, but it has a British monopoly of such services. This monopoly, however, is now being threatened by the Hillman Company, which proposed to operate a service to Paris from Gatwick, ten miles south of Croydon.

The two principal air routes for which Imperial Airways is responsible are the India Route and the Africa Route.

The present line followed by India Route is Croydon-Paris Brindisi-Athens-Alexandria-Cairo-Gaza-Rutbah Wells-Baghdad-Basra-Bahrein-Sharjah (Oman)-Gwadar-Karachi. The journey of 5,000 miles is made in $6\frac{1}{2}$ days at an average speed of 28 miles an hour.

Organised flying the whole way from England to India did not begin until 1929. The first 'bit and piece' of the route was between

Cairo and Baghdad and was operated by the Royal Air Force. This was taken over by Imperial Airways in 1924—the stretch between Croydon and Alexandria was added in 1928 and the final section between Alexandria and Karachi, in 1929.

Since 1929 the European section of the route has been modified three times, while the route east and west of Baghdad has also been changed, the former as recently as January, 1933.

Originally, in Europe, the line of the route was from Croydon to Basle by air—from Basle to Genoa by rail—and thence by way of Naples and Athens to Tobruk (Italian Tripoli) and Alexandria. In 1930, owing to disagreement with the Italian Government, a new route through central Europe was adopted, but a return to approximately the old line—with the exception of the diversion to Tripoli—was found possible in 1931. The rail journey from Paris to Brindisi followed on experience of the difficulty of crossing the Apennines.

The line from Athens to Baghdad *via* Asia Minor is obviously shorter than the line *via* Egypt. The move from the north-east to the south-west shore of the Persian Gulf entails a longer journey and, therefore, larger tanks for the aircraft concerned.

Persia, not being a signatory to the Air Convention of 1921 or the Protocol of 1929, retains "complete sovereignty of the air over its own territory." Consequently, in 1929 when she gave permission to Imperial Airways to fly along her south coast for three years, she stipulated that when that period was over, the Company should use a corridor through central Persia which she would designate. The line of this corridor—by way of Ispahan—was given in 1931, but after ground and air survey—it was found to be impossible, and consequently after two months' and then four months' extension the present route was adopted.

Beyond Karachi there is a considerable gap before Australia is reached. India itself has two local services, that operated by the Delhi Flying Club from Karachi to Delhi, which during the past year has been very regular, and those of the Tata Company between Karachi, Bombay and Madras.

When Imperial Airways first came to Karachi in 1929, it agreed not only to run on to Delhi, but to continue its service to the frontier between India (Burma) and Malaya. In 1930, however, before this scheme could come to fruition, the Indian Government, anxious to

keep any service within the limits of India in its own hands, expressed its intention of subsidising a Government line between Karachi and Calcutta by way of Jodhpur, Delhi and Allahabad.

This service was to take 24 hours between termini, as against 64 hours by train and, eventually, it was hoped that the mail from Home would arrive at Calcutta in $7\frac{1}{2}$ days as against 27 by sea. Actually, Puss Moths were purchased for the purpose. Unfortunately, in 1931, (the State Service by this time was only running as far as Delhi) for reasons of economy it was found necessary to abandon the whole scheme. The Puss Moths were disposed of, one was allotted to the Viceroy for touring and two others were sold to the Egyptian Government; the operation of the Karachi-Delhi service was transferred to the Delhi Flying Club and all aerodromes and meteorological stations other than those now in use were closed down.

As far as one can gather, there will be in the near future a service from Karachi not only to Calcutta but to Colombo, but no statement has been made as to who proposes to operate these services, nor has anything appeared as to the possibility of closing the gap between Calcutta and Singapore.

From Europe to the Far East there are at present two competitive services, the French 'Air Orient' to Saigon and the Dutch K. L. M. from Amsterdam to Batavia. Both companies have an advantage over Imperial Airways. They are not very much faster—each runs through to its terminus at an average speed of 33 miles an hour—but they make up time on the way and are, therefore, more punctual. Neither company can pick up passengers or mail for delivery in India.

As K. L. M. has been running successfully for two years and has operated feeder lines both to Malaya (Singapore) and to the uttermost limits of the Dutch East Indies, an offer was made last year to start a mail service between Europe (Amsterdam) and Australia (Port Darwin). K. L. M. did not ask for a subsidy or a guarantee—except as to a minimum amount of freight—but proposed to make a small surcharge for expenses and promised also to withdraw as soon as Imperial Airways was ready to come in. According to the programme, mail would be delivered in Port Darwin in 12 days and, therefore, in Melbourne two or three days later. If the proposal had been accepted, the position of K. L. M. in the East would have been analogous to that of Pan-American Airways in the Caribbean. When the

offer was considered by an inter-Departmental Committee set up by the Government of Australia it was rejected on the following grounds:—

- (i) the sum demanded for the carriage of mail was too high ;
- (ii) there was no guarantee that the service might not be discontinued ;
- (iii) the acceptance of a foreign offer would have a bad effect on civil aviation in Australia ;
- (iv) there was no certainty that the British Post Office would use the service ;
- (v) it would be unpatriotic to allow the Dutch to operate such a vital section of an Imperial Air Route.

The Committee, therefore, submitted an alternative scheme for a weekly service from Singapore to Port Darwin and called upon Imperial Airways to co-operate by speeding up its service to India by a day. In order that Australia may get the greatest possible value out of the route—it is assumed that the Singapore-Calcutta gap will be bridged by that date—it is proposed before 1934 to re-organise local services beyond Port Darwin so as to provide for three main trunk lines:—

- (i) Port Darwin to Daly Waters and Cootamundra, for Sydney, Melbourne and Adelaide ;
- (ii) Port Darwin to Wyndham, for Broome and Perth ;
- (iii) Melbourne to Hobart (Tasmania).

Except for (iii) which is a new route, this will involve very little modification in the routes of the present subsidised lines.

This final ' bit and piece ' has now been flown and re-flown and should not present any insuperable difficulties. Moreover, there is a great natural junction at Singapore, which by 1935 should have its up-to-date airport, for Hong-Kong and the Far East. An R. A. F. flying boat squadron thoroughly surveyed the route to Hong-Kong and the Philippines in 1927-1928 and, apart from the Dutch and the French, the Siamese, who have always been keenly interested in aviation, have been making experimental flights between Hansi, Bangkok and Rangoon.

The Africa Route.—We may now turn to the Africa Route—the final realisation of the dreams of two great Imperial dreamers, Cecil Rhodes and Abe Bailey. This route, as we have seen is linked

up with the India Route by two switches—at Cairo and Athens respectively. It may eventually join the third Route even further south and east, if the experimental flight of the Royal Air Force along the southern coast of Arabia proves that a connection between Sharjah and Aden and, eventually, Nairobi is feasible.

(a) The route—which runs from Cairo to Capetown by way of Khartoum, Nairobi, Salisbury and Johannesburg is definitely all-Red. It only passes over one state in which Britain is not sovereign, but so long as British troops remain in Cairo and on the Canal Egypt may, surely, be called a ‘sphere of influence’.

(b) It is subsidised by all the colonies through which it runs, and by the Union of South Africa to the tune of £400,000 payable in tapering amounts. Moreover, under the Allenby Agreement of 1924, it will be the only air line in Egypt for the next 20 years.

(c) Though it only saves three days to Khartoum, the saving increases to $14\frac{1}{2}$ days at Kisumu, 13 days at Broken Hill and even to 6 days at Capetown.

(d) It is well equipped with feeder lines by Wilson Airways in Tanganyika, from Nairobi to Dar-es-Salaam and Mombasa on the east coast (Tanganyika Government Line); from Windhoek to Kimberley which may eventually run right across to Walvis Bay—and from Capetown both to Port Elizabeth and Durban and to Port Elizabeth, Bloemfontein and Johannesburg. Moreover, sooner or later, the Belgians will come through from Boma on the coast of the Belgian Congo *via* Leopoldville and Elizabethville to Broken Hill, and the French to M'beya on their way from Dakar to Madagascar.

It is, however, a route of great difficulty, much more difficult than the India Route. As far as the Great Lakes with the Nile as an obvious landmark it is comparatively easy, but beyond—below 3,000 feet—the air above Lake Tanganyika is a pit of peril. Further south, there are, first of all, a thousand miles of very mixed country which must be flown at a very high altitude, below which ox-wagon transport is only possible; and then another 12,000 miles over jungle and bush veld of the very worst kind along which there is nothing except the telegraph line, an impossible medium for spares and supplies, or for salvation. Moreover, on a very hot day, owing to the thinness of the air, 5 to 10 miles an hour is added to the safe landing speed of aircraft, with an additional 10 miles when an aerodrome is over 6,000 feet above sea-level.

Because of above, there are those who are not entirely satisfied with the present route and would cross over to the other side of Africa, reinforcing their argument with the contention that West Africa has reached a greater stage of development than East Africa. They would, therefore, like to see (i) a coastal route operated by flying boats or (ii) a combined land and sea route.

The first route has certainly great advantages :—

- (a) it would link London more closely to the Guinea trade ;
- (b) it would make of Bathurst, the best departure point for South America, an aerial Crewe ;
- (c) south of the Gulf there are no less than 30 rivers of land-locked lagoons navigable for flying boats.

On the other hand it must be remembered that down to Dakar—over a quarter of the route—the coast is used by the French *Compagnie General Aeropostale*. To counter this disadvantage, route (ii) has therefore been suggested. This would proceed by way of Malaga to Tangier or Alicante to Oran and thence across the Atlas range and the Sahara to Lagos and on down the coast as in route (i). The objection to this route is that it is subject to vertical air currents, contains iron deposits which may deflect a compass and crosses the Tanezruft, in which there are no wells or surface water.

So far we have looked east and south-east from Britain and linked up the Motherland with three Dominions and an Empire. We can look westward and consider the possibilities of a third route—to Canada across the Atlantic. Though the Atlantic has been now flown a good number of times by various types of aircraft—it has been crossed 7 times, for instance, by the *Graf Zeppelin*—there is only one trans-Atlantic service, that operated by the French from Dakar to Natal and on to Rio de Janeiro and Buenos Aires.

Several other possible services are now, however, in the wind. The first on a line from England to the centre of Canada by way of the Faroes, Iceland, Labrador, Greenland, Baffin Land and Hudson Bay. In this route we are interested and have already despatched two expeditions indissolubly connected with the names of "Gino" Watkins and Percy Lemon of the Royal Corps of Signals. In addition, Denmark and Pan-American Airways—the latter contributing to the cost of the second expedition—are also interested. Until all the reports

are collected, it is difficult to reach a definite conclusion but the following tentative opinions seem to have been formed—

- (i) The route is infinitely better than a route westward *via* Newfoundland and eastward *via* Ireland, as this on both sides of the Atlantic is subject to frequent fogs and high winds and often has to be flown blind or with instruments.
- (ii) No crossing need be longer than 700 miles, provided there is an efficient ground organisation.

Certainly, in winter the situation is better than in spring or autumn, when the ice is melting or forming. In summer, there would appear to be no danger, once skids are fitted or the frozen lakes are used. At this season there is no wind and very little fog.

The great obstacles, apparently, come from the Föhn, a violent and variable wind, which blows at from 80 to 90 miles an hour and raises large wind-drifts on the surface of the ice, which seriously affects taking off. As, however, the Föhn is strongly localised, the wind area might be avoided. Foreheating, when the temperature is at 30 degree or 40 degree below zero, is also a long and tedious process.

The second practicable north-Atlantic route, on which better weather is assured, is *via* the Azores to Bermuda and thence by way of Charleston and New York to Montreal. This is the route in which the United States Post Office is showing considerable interest. The snag in it is that it entails a sea journey of 2,075 miles. It is believed that this may be overcome by 'seadromes'—consisting of a series of flotation chambers with an attached platform enclosed by cables—an expensive proposition, as the estimated cost of each 'seadrome' is £800,000. It would be of interest to know what the French, who have a monopoly of flying in the Azores, have to say to this route.

It has also been suggested that it might be possible to use an outward route from Cape Verde to the West Indies with the prevailing westerly winds, and a return route on the Great Circle with the prevailing easterlies.

Meanwhile, the immediate solution for quicker trans-Atlantic traffic may be found by the German Lloyd. When a German Lloyd line is within 1,275 miles of New York, an aeroplane is catapulted from its deck. This aeroplane takes 24 hours with two stops on the way to reach New York with the result that letters from Cherbourg are delivered in New York in under 4 days. It is significant that

the construction of modern airports at Southampton and Galway are under consideration.

In our original definition of Imperial Air Routes it was stated that such routes existed all over the Empire. We have already found them working in Australia, India and South Africa. There are also Imperial air routes in Canada. Unfortunately, most of these have been recently suspended owing to the economic depression, though a new move has now been made in the direction of the construction of main line air ports. The story of the birth of air routes in Canada is almost as interesting as the story of the birth of its railways. Air routes at the outset were found to be invaluable in areas to which roads and railways had not penetrated and the only method of communication was by dog sleigh and canoe. In the populous part of Canada—along its two trans-continental railways with their innumerable branch lines—air routes came slowly into their own. However, cheap fares—it was actually cheaper to travel by air than by Pullman—over routes well lighted by night soon became popular and within eight years, until 1931, the number of flying miles had increased on organised air routes from 50,000 to 1,500,000. Moreover, it was possible to journey by air from Aklavik in the Arctic Circle *via* Pembina and New Mexico across the islands of the Caribbean to Buenos Aires and Valparaiso.

Luckily the Aklavik—McMurray route has been maintained. This and the Fly River route in New Guinea are two of the most remarkable in the Empire. On the former, it now takes 11 hours 5 minutes to bridge a space that used to be covered in winter in 75 days by dog train and in summer in 15 days by steamer. On the latter—one of the richest metalliferous areas in the world—the aeroplane now takes 50 minutes to cross hard tiring jungle and mountain ranges for a previous journey of 8 days. Australia affords an interesting contrast to Canada. It has a smaller population. There are no trans-continental railways, nor is there any money available for such or for a federal road system, even if the conflicting opinions of the various states could be won over. Moreover, its eastern lines run inland without horizontal communication between the termini, and there is no railway within 265 miles of the northern settlement of Port Darwin. Consequently, its squatters and settlers are terribly isolated and often dependent on a quarterly camel for their supplies.

And so, Australia, the best flying country in the world, without fog or blizzards, or difficult ground landings, is ringed round with air routes supported by small, tapering, subsidies and in the north 40 *per cent.* of its mail is carried by air.

There may be some surprise that air routes have not been started at Home. The situation is analogous with that which prevails between certain capital towns in Australia. The railway service is rapid. The trains are equipped with elaborate sleepers. No journey lasts more than ten hours. Consequently, the business man who only saves a hour or two in travelling by air and has got used to being dropped half-awake in a porterless station in the small hours of the morning, will not use an aeroplane in preference to a train. Such services as have been started have generally been across short stretches of water—as from Southampton to the Isle of Wight, from Bristol to Cardiff, from Liverpool to Douglas, from Orkney to Inverness.

So much for the facts. We may now deal with criticisms and possible developments. Criticisms, it may be noted, are levelled most often at the India Air Route. The first criticism, however, touches both the long Imperial Airways routes. The question is often put—why is it necessary to traverse France, Italy and Greece between England and the Middle East, and why could not a flying-boat route be developed which (except for the use of a stopping place on the French coast) would be all-Red? The route that has been suggested is Gibraltar—Malta—Cyprus—Haifa. The distances are not much longer than those adopted at present on other sections of the route—though the 980 miles from Gibraltar to Malta represents a maximum day's flight under present conditions. Furthermore it would not only mean (*i*) the virtual adoption of flying-boats as against landplanes—not altogether a disadvantage since the passenger capacity of a flying boat will always be higher than that of a landplane; but (*ii*) the elimination of Croydon as a starting-point, as so far no machine has been devised that will start on land and finish in the sea. These are serious obstacles, but they might be overcome in order to make the route more Imperial, as might also be the case, if beyond Singapore the stepping stones to Australia were not the Dutch East Indies, but North Borneo and New Guinea.

The second criticism is often expressed in drastic terms. Why is the service to India so slow? There are certain difficulties, which

we are sometimes inclined to forget, which face Imperial Airways under present conditions.

(a) *Lack of Capital.*—The company is running on a capital that would not buy much of a steamer. Its subsidy in 1931 from the Government was £520,000 as against—

£768,000 paid by Italy,

£920,000 paid by Germany,

£1,580,000 paid by France, and

£3,500,000 paid by the United States

Moreover, under the agreement of 1924, the subsidy decreases each year.

The maintenance of a route is no cheap matter and yet, if you want to attract passengers, you have got to keep the fares low. At present passenger traffic is a dead loss. It costs £180 to carry a passenger from Cairo to Karachi, of which only about half comes back in fare. This is incidental and lack of capital has an even more serious effect upon the service. Of necessity, it entails a small reserve of machines and there are only 30 in all, of which some only are interchangeable. The result is that if bad weather breaks out, a pilot cannot run the risk of going on and possibly stranding a machine, because he knows that there is no likelihood of another plane coming up behind him to pick up his passengers and freight.

(b) The use of the same aircraft for passengers and mail. If aircraft are used for the double purpose, they must fly at a slower rate and for a shorter continuous distance.

It is a most point whether, eventually, there may not be on every long service three types of craft; the fast machine—flying at 200 miles an hour for mail and valuable commodities in small bulk; the intermediate machine—at 140 miles an hour for passengers and light luggage; and the slower truck machine for heavy baggage. At present six hours is the maximum continuous time a passenger can remain in a closed space in comfort. It has been said that mail-carrying aircraft with relays of pilots can fly 2,000 miles in 24 hours, or 1,000 miles, if there is no night-flying. Actually the former is being achieved by 'Aeropostale' on the trans-Atlantic route and when the United States first started their trans-continental air service, they adopted the principle that a fast and regular mail service must precede any

carriage of passengers. It is not difficult to work out the time in which a fast mail-carrier could reach India.

(c) The absence of night-flying. Last year there was some talk of regular flying by night from Baghdad to Basra though it has not yet materialised. Actually, the only time there has been any night flying on the India air route was in the days of the "Baghdad Air Mail". When their pilots reached Ramadi with their Vickers machines on a fine night and conditions being favourable, they used often to fly on under the stars to Baghdad.

To-day night-flying is part of the recognised routine on air routes in Germany, Scandinavia and Belgium, and you can travel along a lighted airway from London to Königsberg and from London to Marseilles.

It must be remembered, however, that the cost of lighting is extremely high. Between Croydon and the south-east coast of England the cost worked out at £1,000 a mile and this cannot yet be a charge on the limited capital of Imperial Airways.

After all, Imperial air routes do not exist solely for the lovelorn swain or the grass widower with his weekly mail budget. They are an Imperial asset. The economic unity of the Empire is dependent on its physical unity. The great barrier of our age is not space but time. The mile is shrinking in value every year. The diverse interests of the Empire can only be reconciled and the Empire can only be brought to greater community of intercourse and interest by new means of transport. We have advanced a long way since the war. The converted bomber with its racks turned into a mail bag was not exactly as fast or as commodious or as safe as the 'Atalanta' or the 'Hercules'. People are becoming more air-minded year by year. The use of aircraft for mail and small freight slowly but definitely is becoming more popular. There is a steady upward movement in the sale of capacity on offer, in the revenue from traffic, and in regularity of service. The number of flying miles on Imperial air routes is steadily increasing. Air routes are not yet trade routes, but in the future they may well become so. When this is so, we may be glad, especially in India and the East, that we have organised and kept open our Imperial air routes.

ICELAND EXONERATED.

BY CAPTAIN W. H. GARDINER.

8th. K. G. O. Light Cavalry.

The depression is still with us. It looks indeed likely to continue. The numerous experts who, for some time have been prophesying its end are confounded. The countless experts who have advanced opinions as to its cause and cure, appear to have brought a solution no nearer. All the leaders and lesser lights of politics, finance, commerce and economics have expressed their views, the variety of which is astonishing. The gold standard, faulty distribution, the supersession of manual labour by machinery, capitalism, excessive wages, the high standard of living, reparations, retailers' margins, mal-distribution of gold, frozen credits, the American debt, and the Russian five years' plan are just a few. The fact that hardly any are in agreement is even more astonishing. Since it is impossible for more than one to be the correct reason, it follows that some of the experts in whom we placed such trust are very fallible. This is indeed the logical conclusion. For the horizon of the expert is bound to be narrow. His own particular subject is substantially the only one on it and therefore all others are relegated to very subsidiary positions. Wars cannot be won without a high standard of physical training say the physical training schools, or without exemplary sanitation say the doctors. I do not contend that the expert can be dispensed with. Rather do I maintain that he is essential; but not I submit, as an adjudicator on any general problem, but rather as an adviser to show the way his own particular subject affects that problem. Thus only can a true perspective be maintained.

This world crisis has only too definitely demonstrated the fallibility of the economic expert. After three years, the elements of a world wide economic collapse are daily making themselves plainer. Conditions in many countries have reached a state of panic; in others they are fast following suit. The experts discover new causes, the politicians arrange fresh conferences, the public make greater sacrifices, and——the depression grows deeper.

The general existence of profound ignorance concerning the elements of finance cannot be denied. It is a subject of paramount

importance, and it is not abstruse, so this ignorance is inexcusable. Economic knowledge is equally simple, equally essential, and equally lacking. But it is surely unjust to blame for that the general public when such hosts of experts have demonstrated their profound ignorance. Nevertheless I cannot permit Mr. J. B. Taylor's interesting exposition to take advantage of this general ignorance. He shows an excellent acquaintance with the working and theory of credit and the gold standard, and has evidently closely studied the conclusions of experts on these subjects. There does not, in fact, appear to be anything original in his article,* which ascribes the depression to an insufficiency of gold to meet world needs. He takes parallels from other depressions to show that the discovery of fresh sources of gold coincided with the return of prosperity. The hosts of depressions when a return to prosperity took place without the assistance of any gold discoveries or increase in gold production are conveniently omitted. In advancing the insufficiency of gold theory, Mr. Taylor treads on shaky ground. The world's supply of gold has not shrunk since 1928; yet it was sufficient, only four short years ago, to create a notable boom in trade. France and America possess more gold than they know what to do with. In the former country in fact, the holding exceeds the note issue and so no fiduciary paper money is in existence.

It exceeds the 1928 reserve by about 500 per cent. This is normally sufficient to allow direct credit expansion by over 2,000 per cent. and of course an even greater amount indirectly. According to Mr. Taylor such credit should mean a boom of unheard of proportions in France. Yet France is as hard bit by the depression as any other country. America, similarly situated, is more so. The supply of the world's gold is mainly held in these two countries. It has not shrunk. Rather is it being produced in ever increasing quantities far exceeding either the increase in world population or in the standard of living. Last year, India, owing to the sterling premium, exported an amount of gold exceeding the output of the world's mines. This gold had been admittedly sterile and its return to normal channels may be said to have doubled the output for last year, an unprecedented increase. Yet there is no sign of the depression ending.

Let us first of all discuss the tricky problem of credit. It must be realised that an essential necessity to the supply of credit is security.

*"The Present International Economic Crisis and the Gold Standard" by J. B. Taylor, Esq., I. C. S. *The Journal of the U. S. I. of India*, October 1932.

No banker will advance money without closely scrutinising the collateral offered. This is more especially the case in times like the present when all values have fallen to unbelievable depths, and when others, though justified, are unrealisable. To obtain credit, some asset must be assigned as collateral, and moreover, it must be valued at a sum considerably in excess of the credit required. Even on gilt edged securities a margin of about 20 per cent. is demanded. There are at present few firms requiring credit who can produce sufficient security to warrant its advance. The general slump in prices has had its inevitable effect on any available investment. Stocks have suffered with the rest. Advances to speculators on the New York stock exchange have fallen 500 per cent. Not by reason of any diminution in the desire to speculate, but simply because the security of the stocks offered as collateral does not permit any greater advance. It is impossible to contend that credit is not available in the U. S. A. The short term loan rates are down to $\frac{1}{4}$ — $\frac{3}{4}$ per cent. indicating a veritable glut of funds awaiting profitable use elsewhere. Mr. Taylor again returns to this point when discussing future prospects. He maintains that fear of inability to dispose of produce is the only thing which prevents merchants demanding credit to finance production. He also states that loan rates are the lowest for 40 years. Both these points undoubtedly presuppose that credit is available and disposes of his theory that gold is not available to provide credit. Mr. Taylor is again in error in believing that because bank rate is the lowest for 40 years, the rate on advances is correspondingly low.

Bank rate is normally only applicable to the very finest type of paper. The rate on ordinary advances to finance business has little relation to it and depends almost entirely on the risk taken. Otherwise why should many companies take advantage of the present cheap rate at which preferential capital can be secured to issue shares at $4\frac{1}{2}$ — $5\frac{1}{2}$ per cent in order to pay off bank loans *and secure a saving in interest charges.*

It is notable that a simple solution to a complex problem is never acceptable. It is seldom, indeed, acceptable to a simple problem. Certainly not by the expert, for his existence only can be justified if his craft is too complex for the average intelligence. Nevertheless the simple solution is more often than not the correct one. In the present instance there is not the slightest doubt that it is. I am therefore going to examine this world problem from a simple, economic, sociologi-

cal, and psychological standpoint, and will not revert to anything more than the use of common-sense in doing so. I am quite confident that this so-called insoluble enigma can be understood by any ordinary intelligence without a specialist's knowledge of the intricate and involved science of economics "many of whose conclusions are based on assumptions—its vitally important laws are largely hypothetical."

The first definite and obvious fact to be noted is that this depression is no new phenomenon. It is merely one of a series which happen every ten years or so, and which impress by their very regularity. Moreover, owing to the internationalisation of trade, each crisis has definitely affected the whole world. In the last one hundred years these periodical depressions have led to crises in the year 1837, 1847, 1857, 1866, 1878, 1890, 1900, 1907, 1914, 1921 and 1933. The cause of every crisis was a collapse of the prices of primary produce, which led to the primary producer curtailing his normal purchases.

This in its turn caused a general fall in the price level, and therefore a collapse of the credit structure, since the one depends on the other. After a period which usually lasted about three years, confidence was restored and business resumed an upward trend. It must be emphasised that primary production is the source of all trade. If the primary producer receives unremunerative prices for his commodities, he is unable to make normal purchases of manufactured goods. This leads to curtailment of manufactures and shipping services, and so the slump spreads throughout the whole commercial world.

Now we come to the root of the whole matter. What causes the periodic fall in the prices of primary products? Why should these prices move in cycles from very high to very low and back again? Why should the periods be so markedly regular? What is the factor that connects all these movements?

Two simple, incontrovertible and vital economic laws are at work. The first, and by far the most important is that of supply and demand. In fact I should not be exaggerating if I maintained that the whole science of economics is based on it. The second is the law of spirals and is of course the outcome of the first. It is the tendency of all economic changes to keep moving more or less steadily in one direction, until a climax is reached. The movement is then reversed.

The case of any primary producer can be taken; tin, rubber, diamonds, wheat: all are substantially similar. Let us take the

wheat farmer and suppose prices of this commodity have reached boom levels. His natural reaction is obvious. More wheat is planted next year with the object of greatly increasing his profits. All over the world, wheat farmers have similar reactions. The succeeding crop is therefore greatly increased and exceeds the consumption demand. So prices fall and the middleman decides it is an excellent opportunity to lay in stocks. Excessive production continues and is sold at falling prices. As world consumption remains more or less the same, stocks increase greatly and prices continue their fall. After a few years, unremunerative prices eventually force weak producers out of business and all the others to reduce their crops considerably. Production then falls below consumption requirements, but accumulated stocks act as a buffer, preventing an immediate rise in prices, and production continues to remain below normal. Another couple of years pass and it is suddenly realised that stocks are getting low. There comes a demand for wheat which cannot be immediately met. Prices rise to high levels. Production is again stimulated—the lesson of the previous 10 years forgotten—and the spiral is complete and ready to start on another cycle.

Here then is the simple root cause of depressions and booms. Just the natural desire of the individual to make money, to take advantage of exceptionally remunerative prices; rushing, in fact, to do so before the expected fall; and little caring that all the world is doing likewise, thus making surplus production and the consequent fall in prices all the quicker and more inevitable.

In this also is the further simple explanation of the periodicity. 3—4 years of boom conditions, 3—4 years of falling prices, 3—4 years depression and 3—4 years rising prices. The actual periods are of course influenced in their turn by thousands of conditions the principal of which are droughts and wars. The tendency too, is for the actual cycle to lengthen owing to the increasing possibilities of storage in the case of almost all primary products. The accumulation of large stocks not only increases the length of time when remunerative prices are in force, but they also tend to prevent a quick return to normal price levels after the depression is over. Full production is forced on the market to the last, even at unremunerative prices, in an endeavour to outlast the fall. Any surplus over world needs goes to swell stocks and eventually to delay a return of better prices.

This then brings the very pertinent question. Can depressions be ended by artificially curtailing production? I quite decidedly

maintain that they cannot. The failure of the recent attempt to force up artificially the price of rubber is most definite evidence against such a procedure. A moment's examination of the problem reveals the reason. Artificial bolstering of prices permits the potential redundant production to remain in being. As restriction cannot remain in force for ever it follows that, immediately it is removed the surplus is again forced on the market. The policy of restriction in fact merely prolongs and deepens the depression instead of ameliorating the situation. The natural law of supply and demand must be left to cure the slump in prices and interference with this law can only aggravate the situation.

All this however fails to explain why the present slump is the most severe the world has ever known. The fact that it has occurred after the greatest war in history most undoubtedly points to some connection between the two. This deduction is in fact supported by the parallel of the second greatest depression following the second greatest war in history; that which finally ended in 1815. Here again the connection can be shown to be both simple and obvious.

During the war every conceivable primary product was in demand far in excess of normal world requirements. This was mainly owing to the enormous production of all forms of war material, to waste, to loss by destruction, and through the sinking of ships. Prices were consequently forced up to unheard of levels and production was stimulated all over the world.

This production was fully utilised in the year succeeding the war for replenishing the enormous fall in stocks. Although this phase received a temporary check in 1920-21 it may really be considered not to have ended until the beginning of 1929. For the enormous potential production created by the war still remained and was being utilised. By 1929 however stocks everywhere had been replenished, so demand slackened and prices fell. A large part of this surplus power of production is still in existence, mostly financed by swollen war profits, for prices, in many instances, have fallen to unremunerative levels. It follows then that the present depression is not at an end. As long as production continues in excess of demand, prices will remain low. I am prepared to see them continue so for at least another year, but as surplus production does not appear likely to secure the necessary finance beyond that period, a *gradual return to normal should take place in 1934.*

WATER DIVINING.

BY CAPTAIN J. R. H. TWEED, M.B.E., M.C., 1/19TH HYDERABAD
REGIMENT.

Until quite recently water divining has been classed with astrology, palmistry and fortune telling—generally as a remnant of witchcraft and superstition—and quite outside the realm of usefulness for practical men. The idea of a man with a hazel twig being able to tell you what is under the ground by the movements of his wand was too grotesque to be taken seriously by the ordinary Englishman.

But even the most prosaic citizen feels rather different about water divining if he chances to require a well. He goes into a field with the well digger who asks where the well is to be dug. The employer probably finds it easy enough to indicate an area where it should not be dug. If it is the water supply for a house which is contemplated, the area in which the proposed drawing room will be situated is manifestly unsuitable. But beyond that, almost anywhere reasonably close would be all right. So they turn from the site of the proposed well to the question of its probable cost. It transpires that the question of depth is the ruling factor, and depth is a matter of luck. If they strike an underground stream, an ample water supply may be found near the surface; whereas if their luck is out, they may go down 200 feet and find nothing. The cost of bringing the water into the house from almost anywhere in the region is small compared with the risk of a deep and unsatisfactory well.

Then it is that the thoughts of even the greatest sceptic turn longingly to water divining. He is completely in the dark, and like a sick man who can get no comfort from the doctors in whom he believes, he turns to the quack whom until now he has despised.

Thus it is that water diviners, in spite of their unconvincing methods and frequent mistakes, have yet survived in this enlightened age.

In the West of England there are still great numbers of water diviners who, often enough, combine their profession of water divining with the more prosaic trade of well-digging. The professional preliminaries with a hazel twig being generally regarded as a mere orna

mental method of advertising and securing the contract for the sterner business of digging the well. But in France the water diviners have been taken much more seriously by men of science. A book by Henri Mager, recently translated into English and published by Bell, throws a very different light on the whole subject and is of absorbing interest. After giving a history of water divining in the last few centuries, M. Mager describes his own investigations into the subject and offers a scientific explanation of the phenomena.

There can now be little doubt that water divining is not a form of necromancy and humbug but a genuine science. Assuming this has been established, it is manifestly of no small interest from a military point of view. It is an interesting conjecture to consider the effects on the earlier part of the Mesopotamian campaign if one side had combined reliable water divining with the use of high efficiency boring plants drawn by tractors. There are almost certainly large underground streams between the Tigris and Euphrates. If these could have been located near the surface, the boring would have been simple in the Mesopotamian silt and with portable pumps, water might have been brought to the surface at the rate of 20,000 gallons an hour after 12 or 24 hours' boring.

It may, therefore, be of interest to give some details of the methods of water divining generally employed.

The most usual way of water divining is with a forked stick. The kind of bush from which it is cut seems immaterial although most water diviners favour something special. Hazel and willow are the commonest. The stick must be whippy enough to bend without breaking and the forks must branch at approximately the same angle from the main stem. The usual dimensions of these Y shaped sticks are with about 12" arms branching from a main stem of half that length. Modern water diviners often substitute this by two straight twigs bound together at their thicker ends by a piece of string.

The method of holding also varies greatly. Those who use long sticks (12" to 18") usually hold the ends of the arms one in each hand, palms upwards and thumbs outwards. When the stick is thus held and brought to the level of the waist, its arms are automatically bent outwards and the main stem, which sticks out in front of the body horizontally, is in a state of balance, the spring of the arms tending to turn it upwards or downwards if the balance is disturbed.

The water diviner thus equipped usually adopts a strained and mystical attitude (which is quite unnecessary but is very impressive) and walks slowly over the ground to be surveyed. Presently the point of the stick begins to tremble and finally flips up or down in spite of the efforts of the diviner to hold it still. It sometimes even breaks. The process is repeated two or three times traversing the area from various directions. If the stick twists each time at the same point on the ground, the diviner announces that it is a favourable site for boring or digging a well, and all that remains is to persuade someone to put up the money to sink it and see if the diviner is right.

This is roughly speaking what happens when the ordinary country water diviner or amateur applies his art. But the modern expert goes through a much more complicated process and usually takes a good deal longer before he gives an opinion. More about him later.

Some diviners use clock springs, others a length of wire of various metals and yet others use whalebone rods in place of twigs. Those who use smaller rods of wood or whalebone hold them in the fingers instead of gripped in the palms of the hands.

Another method of water divining is with a pendulum such as a wooden ball at the end of a length of string, a ring and thread or simply a watch and chain. All these methods are capable of giving astonishing results. One of the advantages of a pendulum is that it is capable of doing several different things. It can oscillate backwards and forwards or it can gyrate clock wise or anti-clock wise, all of which movements have definite meanings for the expert. The pendulum however has one very great disadvantage. It is very liable to be affected by unconscious suggestion on the part of the user. This question of suggestion is one of the great difficulties of water divining.

The force which moves the stick or pendulum is certainly a very delicate one. It is an open question whether there is any independent force at all or whether the movements are not due to the unconscious muscular reactions of the diviner when over water; the stick and pendulum being merely instruments for registering these reactions. Many water diviners will not agree with this latter suggestion. They say they feel a very strong force pulling at the stick. But a study of the mechanics of a whippy forked stick when held as described above, accounts for this. The muscular force exerted horizontally on the arms of the stick is diverted by its whippiness into a force acting verti-

cally. Thus it will be seen that the divining rod in spite of its apparent crudeness is really a comparatively delicate instrument when properly held.

Another point, about which there is a good deal of difference of opinion, is the question of what proportion of normal people are potential water diviners. My own very limited investigations on this point go to show that something like one in twenty-five could find water if trained.

The proportion of sensitives seems to be higher among Europeans than Indians and higher among women than men. A simple way of finding out whether someone is sensitive or not is to give him a pendulum consisting of a wooden ball at the end of about eight inches of string. If this ball is held over a wire along which an electric current is flowing, the ball will gyrate anti-clock wise if the holder is a sensitive. Owing to the factor of suggestion which has already been referred to, it is necessary to make this experiment carefully.

The examiner should place himself in position so that he can control a switch which turns on and off without noise and at the same time be able to watch the pendulum. In a few minutes it will become apparent whether the holder is a genuine sensitive or not. There is of course a certain time-lag after the switch is turned on before the pendulum will move. The correct height above the wire at which the ball should be held and the exact length of the string must be found experimentally as there is often a personal variation. If the experiment is positive, the string should be lengthened to about twenty-five inches, when the operator should be tested over a known underground spring or a buried water main where the ball should again gyrate anti-clock wise when the correct length of string has been found experimentally.

It must not however be supposed that because an individual responds to these tests, he is at once competent to site wells. There is a tremendous individual factor of variance in all the manifestations of water divining, and these can only be found by a long period of personal experiment in a great variety of country, climate and atmospheric conditions. After carrying out such experiments regularly over a period of two or three years the would-be water diviner may have collected sufficient data to be able to say with some certainty that water will or will not be found at a given point. But even then

ne is only at the beginning of his studies. The question of yield, depth and potability are all of great importance and an expensive bore will not be started unless some information on these points is forthcoming.

The Expert water diviners in France can give the analysis of an underground water supply as accurately as a chemist in a laboratory who has samples at his disposal, although the water diviner has never seen the water he has analysed.

The expert is able to make his analysis and his estimate of depth by virtue of the fact that the emanations from underground water and mineral masses do not only rise vertically to the surface but at varying angles. To be able to recognise the vertical emanations from those rising at an angle is one of the first necessities of a reliable water diviner ; until he can do this there is at least a two to one chance of his being wrong, since two strong emanations, one each side of an underground stream, rise at 45 degrees from the vertical. It is these emanations which make it possible to estimate depth. To learn to recognise these various emanations, one from the other, is a matter of personal experiment. One method recommended by M. Mager is to go over the ground at different times of day. In the evening all emanations except those immediately over the underground water, are very feeble or quite imperceptible.

Sufficient has been said to show that water divining is not the simple matter that it at first appears and requires a lot of study and experiment. This is especially true for the kind of water divining required in India where large quantities of water are usually aimed at.

In many parts of India there is a well defined hydrostatic level comparatively near the surface and for wells which tap this source of supply water divining is of course quite unnecessary. It is where the deeper and larger sources of supply are required that the water diviner is in demand.

It will be seen from the description of a water diviner's methods, that it is a slow process. But a water diviner is often called upon to select the most favourable site for boring in an area of several square miles. It is then that a knowledge of geology may assist him and save him much time and energy, although too much reliance must not be placed on this method.

A study of the map of a valley would probably indicate the rough course of a stream flowing down it, even if the river itself was not

marked. But if the valley were covered with even 30 feet of silt, the map of the new surface would give only a very rough indication of the course of the stream below. When it is remembered that water diviners are concerned with streams as much as four or five hundred feet below the surface, it will be seen that geology is only a very rough guide. This is especially true in rocky country where the underground streams flow through fissures and gorges in the subterranean rock. Even where the subterranean soil is alluvial or similar to that of superficial river beds, the underground streams seem to behave in much the same way as in surface rivers when they first leave the hills. Although the bed is perhaps a quarter of a mile wide the actual stream is only a few yards across and flows sometimes down one bank, sometimes down the other, sometimes splitting up into two or three channels only to join up again some miles lower down.

With such conditions too the geologist has but a poor chance of success without the assistance of a water diviner. Geologists often owe their apparent successes to the fact that an underground stream is bordered by areas of overflow where the water lies in water bearing sand or pebbles. But these conditions are uncertain and not so satisfactory as when the bore is sunk directly into the underground stream.

The procedure of an expert water diviner is a good deal more elaborate than that of the west country douser, which has been described above. If the area to be examined is large, the expert will not scorn to study a map from which he will probably make up his mind beforehand where first to make an examination on the ground. It is as well to make this first examination in the early morning or evening when only vertical emanations are perceptible. He walks over the ground with his stick, pendulum or whatever instrument he favours (some diviners can dispense with an instrument and use only their bare hands) until he feels the presence of underground water. He then marks the spot and by approaching it from various directions and by moving about in the area, endeavours to plot the course of the underground stream or the dimensions of the underground lake.

In doing this it is often found that the first indications were only those of a side branch or off shoot of the main stream which is some way off, in which case the process of plotting must begin all over again. When the main stream is plotted on the surface with flags, the emana-

tions rising diagonally are examined with a view to estimating the depth. Experts will then make a further examination to test the potability of the underground water. This can only be done in the middle of the day. Finally before giving a definite report he will probably visit the same area again on two or three successive days to confirm the first day's observations.

Water divining in this way is, for some reason, extremely exhausting and is liable to bring on a headache. Weather conditions influence diviners considerably. On thundery or windy days, results are frequently misleading.

A good water diviner given sufficient time and favourable conditions will seldom be wrong when he says that water exists below the ground at a certain point. The width of an underground stream can also be estimated fairly accurately and from this some estimations of the yield can be made. The depth below ground at which water will be found is a rather more difficult matter but a good diviner will usually be fairly near the mark. He can say with some certainty that the stream that he is examining is not more than a certain depth below the surface, but it is some times found at just half his estimate.

In this brief survey of water divining from my own very limited knowledge and experience of the subject, many of the questions frequently asked about it have not been dealt with. This is partly due to a desire for brevity but more often because the answers are not known. But sufficient has been said if it is shown that water divining unlike second sight or a Grecian profile is not the chance gift of nature but, like any other art, it is a natural aptitude which can only be developed by long study and constant practice.

PROPPING IT UP.

BY PHOENIX.

Whatever the excitable politician or other vocalist may say, the ordinary soldier does not enjoy pooping off his gun at or prodding with a bayonet into a crowd of unarmed fellow countrymen however foolish, misguided and trying the latter may be. Higher up the scale, the commander of troops cannot be said to enjoy the job of aiding the Civil Power. The whole thing seems to bristle with restrictions and difficulties. You cannot simply go in and dot it one.

In the first place you cannot as a rule do anything at all unless requested to do it by a magistrate or some other civil authority. Most annoying. Then again you are seldom in control of the affair. Although every soldier, very rightly, feels that he would run the show far better than anyone else, the fact remains that it belongs to the civil authority. The soldiery are called in merely to prop it up, not to take over possession.

Besides this there are others already outdoing the same job. The police are there doing things in their own way, and their way is often different and not according to the soldier's view. Very trying.

Spread over the whole thing like a net, impeding and restricting all action is the LAW. The Code of Criminal Procedure and the Indian Penal Code bring their baleful influence to bear on the mind of the military commander who is therefore liable to enter the arena with a sense of difficulty if not of irritation.

The object of this article is to show how the Cloak of Difficulty may be removed from the Shoulders of Irritation.

Colonel Bangs, the principal figure in the following episode should be regarded to be, like oneself, the *beau ideal* of a soldier. He had spent many anxious hours during each of the umpty years of his service preparing himself for the various roles that he might have to fill as an officer.

He was a no mean auditor of accounts ; he could run a horse show ; he had developed an eye for slaughter cattle ; he was a master of trigger pressing ; he could judge distance up to 1,400 yards with his back to the sun or facing the moon : He could tell, blindfold, whether

an incinerator was functioning correctly or not; and, at a Court Martial, he could if required fill the post of Prosecutor and Prisoner's Friend simultaneously. (In fact he often did.) You may be perfectly certain therefore that, like the rest of us, he had spent many sleepless days studying Aid to the Civil Power.

When therefore Colonel Bangs, newly arrived to take over command of the troops in the town of Bismilla in the province of Utopia, was summoned to a conference by the Deputy Commissioner he was not perturbed. He arrived on the scene burning with the desire to co-operate (but determined not to be bullied or cajoled into doing anything which he did not ought). He was quite clear in his mind that—but wait, you will see.

The first thing that happened, after mutual greetings and compliments, was that the Civil Authority in command (*i.e.*, the Deputy Commissioner) and the Police (the Deputy Superintendent of Police) began a combined offensive on him.

The Deputy Commissioner in a most masterly way put the picture before Colonel Bangs. The political situation, the communal tension, the difficulties facing the benign government; all these led up to the out-break of the rioting. The danger of the existing situation and the need for caution pointed to the avoidance of provocative action. The Deputy Commissioner's responsibility for the security of various institutions was stressed.

There was, as yet, no intention of using the military except in a preventive role, that is, unless and until something unexpected occurred suddenly. He would therefore only, at this stage, ask Colonel Bangs to provide some guards.

There were places, many places, which required guards. The Government Offices, the Kutcheri and the three Banks were of primary importance. The Law Courts, the main Post and Telegraph Offices, the Power Stations and the Water Works must have adequate protection as quickly as possible. There were also the two bridges and the bungalows of certain government officials. Would Colonel Bangs please arrange for guards on all of these? About fifteen soldiers would be required at each except at the Power Station at which he must insist on fifty men, and at the Telegraph Office perhaps thirty soldiers would be enough because he understood that at this place, what was technically known as "the field of fire" was so good. On

his own bungalow he would be satisfied with a British Officer and eight men. He would turn out of his dressing room which was large and roomy.

At this point the Assistant Commissioner reminded him about the Convent.

Ah ! Yes ! The Convent—certainly—must have a strong guard. British, of course.

The above requests were concluded by a most tactful reference to a private letter which the Deputy Commissioner had received from the military District Commander in which the latter had referred to Colonel Bangs as an exceptionally capable man and one who was all out to co-operate and assist the Civil Authorities in every way. (Beaming smile).

While Colonel Bangs was marshalling his thoughts and acquiring sufficient breath to deal adequately and yet tactfully with this powerful offensive, the Deputy Superintendent of Police came in on the other flank.

He painted a harrowing picture of events up to date. All the police had been employed unceasingly day and night since the beginning,—no rest, no sleep, no nothing. His men, he averred, were about done in, couldn't carry on. The only chance of avoiding disaster was for the military to take on some of the jobs and so allow him to withdraw and rest some of his men.

He suggested that Colonel Bangs should put military piquets at the five main Police Stations and place a reserve of two companies of British troops at the Kotwali. This would enable him to reduce his numbers of police at these stations and thus free them for active operations and for effecting the relief of his tired out men. He was particularly anxious not to ask the military to do police duties. He knew that they must not be used for such things. If, however, the troops relieved his men in this way, all police duties could be done by the police.

There was one other thing which would make co-operation complete. The such-and-such area had to be patrolled. Would the military please take that on ? By so doing no less than forty-five extra police would be made available for the bad area.

At this point the policeman behaved in what the Deputy Commissioner regarded as rather an underhand way. He practically

fraternised with the military. He said to Colonel Bangs that he knew that they were asking a lot, and he as a policeman was fully aware that it was impossible to feed a multitude with the, so to speak, few loaves and fishes available. If however the troops could do what he suggested about the relief of the police he, the policeman, would be able to find a way of arranging for the protection of some of the places mentioned by the Deputy Commissioner.

III.

If this article were a military Appreciation it would include Courses Open to Colonel Bangs.

It might show that—

(a) He could comply with all the various requests and find that he had dispersed all his men to the four winds in detachments of a few men each.

(b) He could make a priority list and allot detachments of correct military strengths starting at No. 1. He would probably find that he had exhausted his troops by No. 17 or so.

(c) He could become very rude and tell the aforesaid civil authorities exactly what he thought of their requests, their common-sense and physical imperfections.

(d) He could burst into tears.

There was once a soldier of considerable repute called Von Molke who remarked that there were always three courses of action open and the enemy invariably took the fourth (or was it the fifth?). In the present case Colonel Bangs took the fifth and sixth. He had pictured scenes of this kind and had a useful selection of Courses in mind, one of which was called Counter-offensive.

His Staff Officer had filled the first few pages of his notebook with the various tasks the troops had been asked to do. Colonel Bangs read them through while the Deputy Commissioner and policeman waited expectantly. (These soldiers are terribly slow, you know. Very thick).

Colonel Bangs remarked 'sotto voce' to his Staff Officer "We could do with another three or four battalions for this lot, don't you think?"

Having allowed this to sink in, he sprang to the ramparts and said:

"There are among these tasks some which I am afraid I definitely cannot undertake since I would be infringing my orders if I did. All

the same, we can, I'm sure, between us meet the Deputy Commissioner's wishes and safeguard these places."

"It will be quite obvious to you of course that I have not sufficient troops to do all you ask but there is no doubt that Mr. D. S. P. and I will be able to work out a scheme which will satisfy you and leave us in hand a useful reserve for unexpected eventualities. No one knows better than Mr. Deputy Commissioner that the reserve is always the most important part of these arrangements."

The Deputy Commissioner thus appealed to, nodded. He was not prepared to argue the point.

"Before we can get down to our exact plan of action" continued Colonel Bangs, "I must ask what measures you are taking to quell the trouble. Those you have mentioned so far are, so to speak, defensive measures. Our plan must of course be based on a plan of offence. You will agree that that is essential?"

The Deputy Commissioner looked doubtful. The idea of offence brought up a picture of many unconstitutional and illegal acts which would be difficult to justify. He shook his head.

"I am afraid that at this stage we are not justified in taking strong repressive measures. We do not wish to embarrass the Government by doing anything which——"

Colonel Bangs interrupted.

"Please do not misunderstand me. I do not suggest any offensive military action. I only want to know the general plan. Are you, for instance, going to aim at securing the ring-leaders or effect the wholesale arrest of rioters? Or are you intending merely to keep the opposing factions apart in the hope that mediation and time will bring about a cessation of rioting?"

"Whatever the general plan of action is," he continued, "I must ask you to do certain things to help me and my troops. You understand no doubt that we soldiers in this kind of work suffer under disadvantages which are not shared by the police. You will, I know, not make our task harder by refusing to help us in various ways which are at your command."

The Deputy Commissioner glanced at the Deputy Superintendent of Police. The situation appeared to have got somewhat out of hand. This was not at all according to custom.

"I will do what I can of course. Only too glad to be of any assistance, but my powers are limited."

The policeman was giving no help at all. He merely looked interested.

Colonel Bangs then asked the Deputy Commissioner to institute the following Orders forthwith, and pointed out that by so doing he would render the task of the police and troops very much easier and make possible a combined plan with the limited forces available.

A curfew order.

An illegal assembly's order.

A carrying of weapons and *lathis* order.

The Deputy Commissioner was averse to taking such drastic action until the situation deteriorated. Fortunately the policeman came over strongly on the side of Colonel Bangs and the Deputy Commissioner was persuaded to anticipate the deterioration.

"Very well," he said, "I will do it but it would be better not to enforce the orders too strictly."

This remark was too much for Colonel Bangs. His training had not prepared him for this, and he nearly wrecked the whole affair by forgetting his tact. His Staff Officer observed that the bronzed crimson of his superior's neck had become a brilliant puce. He acted quickly. With a devastating sneeze upset the Deputy Commissioner's red inkpot. The resulting interlude enabled Colonel Bangs to recover.

He spoke mildly.

He deprecated the idea of issuing an order and failing to enforce it in full. Neither he nor his troops understood such procedure. If an order was issued whether curfew, *lathi* or any other, he assured the Deputy Commissioner that he and his men could be trusted to enforce it only in its entirety.

It will be observed that Colonel Bangs had carried out a very useful double headed counter-attack with success, and he now asked for an hour in which to work out a detailed plan in co-operation with the policeman.

This plan would then be submitted for the approval or otherwise of the Deputy Commissioner. The latter gladly agreed; he did not feel qualified to make out detailed plans for police and troops and thought it advisable to leave this to the experts.

While working out their plan Colonel Bangs and the D. S. P. found the need of asking for further assistance from the Deputy Com-

missioner. The disturbances were in the main communal, but owing to the effective action taken by the police during the early stages, some of the rowdier elements had begun to show anti-police and anti-government tendencies. Moreover, the whole locality, an intricate Indian city, was most difficult to deal with.

They very soon agreed that control would be made very much easier if traffic could be diverted into and limited to specified avenues. They immediately pressed for orders closing certain roads and limiting the movement of vehicular traffic to certain others. The advantage of this was obvious but it raised a storm of protest from the public, especially the Press. Fortunately the Deputy Commissioner was supported by a strong Commissioner and he disregarded the storm and merely informed the complainants that the restrictions would be removed immediately order was restored. The remedy lay in their own hands.

At the same time the Deputy Commissioner on his own initiative much helped the government forces. He applied for powers to control the Press. The latter had done much to undo the work of the police and troops by publishing articles and giving exaggerated and inaccurate accounts of occurrences which further inflamed communal feeling.

The assistance of the Municipality was obtained and in certain areas where the 'tip and run' variety of riot was in vogue and where street lighting arrangements were bad or non-existent, special flood lighting effects were installed.

Many telephone connections had been disconnected because they were being used principally to spread alarm. The lines were now used to instal additional connections where required by the police and military.

IV.

At the beginning of this article I mentioned several of the subjects which Colonel Bangs had studied in order to be ready for all eventualities. I forgot to mention his study of business methods. He had observed that in business it is unsound to do anything without obtaining in return some compensating advantage. His training up to that time caused him to regard this principle with some distaste. To a business friend he remarked that it savoured too much of the methods of Shylock. His friend did not agree.

"No, Sir," said he, "That is co-operation."

MILITARY ORGANIZATION—AN EVOLUTIONARY ASPECT.

BY CAPTAIN H. J. COOPER, R. A. S. C.

“The rifle and bayonet are the principal weapons of the individual infantry soldier ; in the last resort the battle can only be won by their means.” (*Infantry Training.*)

“The present day has no value for me except as the eve of to-morrow it is with to-morrow that my spirit wrestles.”

(*Metternich.*)

Introspection is but rarely practiced among soldiers and enquiry into the reasons for the special organization of an Army is but rarely undertaken among them. In no military manual or commentary is the reason for the organization laid bare ; one meets only with academic definitions and practical indications.

Before analysing the organization of an Army it is pertinent shortly to review the reasons for its existence. An army is taken in this essay as the core of the Defence System, for war cannot be carried into the enemy's country by the fleet, neither can unaided action from the air to-day reduce the will of an enemy to resist. To have an organization ready for defence at any instant is a primary responsibility of Government. An Army is the instrument which is used in the last resort to impose the will of a nation upon an enemy, and war is the last arrow in the national quiver. The extent to which military pressure is applied is in proportion to the readiness of the nation for war and must increase, if success is to be assured, at a greater rate than the resistance encountered. Yet it is not prudent to attempt to exterminate a nation in an endeavour to extirpate a faith, nor to reduce an adversary to complete economic incompetence since a responsibility is involved which policy would repudiate. In the Austrian War of 1866, Bismarck knew that after the impression of Prussian superiority had been left upon Austria it was both prudent and expedient for him to call off the Army. “We must not think that we have conquered the world” he wrote to his wife, “nor forget the fact that we have to live with three neighbours”. A primary attribute of the statesman is a sense of limits which this great German possessed to a remarkable degree. The minister who is inclined to use

the sword as the lightning conductor in an atmosphere highly charged with national and racial potential realises that after the flash, the broken will still live on his border, will have something to sell of which he has need and will possess a market where the products of the nation which he directs may be profitably sold. Industrialization has given place to self support and a world embracing Zollverein is fast replacing a national economic union. The soldier who is trained to close with the enemy and defeat his field forces has not the sense of political limits, since he has but one obsession—the killing of the enemy. Thus an Army exists as the instrument of a policy which governs the conduct of war and not, as is so often supposed, to provide a testing ground for apparatus of slaughter and theories of military manœuvre.

To proceed to the analysis. The basic unit is the infantryman*—the man who in the last phase uses the most powerful argument in war—the bayonet. The energies of the other arms and branches of the army are bent to one end—the assistance of the infantryman. In order that the infantryman may move in security and may receive information of the enemy's dispositions he is preceded by cavalry during the approach march; this latter arm has various aids among which are tanks, aeroplanes and signalling apparatus, to render it more efficient, which is to say it is enabled to render greater service to the infantry. The enemy having been located, the infantryman advances to close with him and in order that the risk of loss may be reduced to a minimum he has recourse to various expedients—armour, speed, dispersion and covering fire. The former are in the nature of aids and will be considered later; dispersion is dealt with in manœuvre; it is to the latter that special attention is directed. Covering fire is provided by automatic weapons of his own and on occasion by flank units and by special automatic weapon units using weapons of a calibre similar to that which he himself carries. Also covering fire is provided by another arm of the service—artillery—using weapons of greater calibre.

That all obstacles to the progress of the infantryman may be removed and that he may proceed at as great a rate of speed as possible to his objective, technical assistance is afforded him; also during

* By the word "infantryman" is meant the man who is trained in the methods of individual fire and movement and not a soldier whose chief business is to march on his feet. His method of progression is of no concern.

periods of defensive action and siege warfare he is provided with cover. These tasks are allotted to engineers.

To preserve his health and to tend his wounds a medical corps is necessary.

To ensure that he can receive orders from his superiors and deliver reports to them, a system of signalling embracing all the advantages afforded by science, is of vital importance.

Further, the advance of time and the application of science to war have devised aids, chief among which are gas, the advanced methods of signalling, aeroplanes, cross country carriers, tanks, mechanical transport, and preserved food. Each arm must have incorporated in it the required proportion of these aids.

Finally to provide for and to ensure the delivery of both himself and all that he requires and all that is essential to those allied to him, a Corps of Supply* is required, which will have two functions—provision and transport.

Thus the essentials of an army are seen to be infantry, cavalry, artillery, engineers, signals, medical corps, and one or more corps for supply and transport.

An army has been shewn to be the core of the national defence system, thus the various installations which each service maintains on land are those which are of primary importance—arsenals, depots, factories, bases, shore stations, and ground installations. The strategic aim of each service is the same—the imposition of the national will upon the enemy, but the tactical methods differ since the vehicle of offence varies—the Infantryman, the Ship, the Aeroplane. But the rearward arrangements of each service have many points of contact. Food, fuel, clothing, vehicles, spare parts, machinery and ammunition are common to each, therefore may the departments concerned be combined with great advantage, and an economy assured. For it is a matter of no concern to a meat canning factory if three persons of the same family make contracts with it under different arrangements, or if several departments of State in the same government compete with each other in the open market for preserved food—yet it is of

* Supply here is used in no narrow sense of food and forage, but is meant to embrace all that an army requires and also the provision of adequate transport facilities that men, food and material may be delivered at the right place, and in quantities and at times conforming to the commander's plans.

vital national economic concern that there should not be this overlapping and waste.

To carry the enquiry into the international sphere is to introduce complications through the maze of which it is almost impossible to find a path ; though it is not without profit to review the difficulties, since when fighting side by side with allies they are omnipresent and become the parents of much misunderstanding and distrust. To place several national armies fighting with a common aim under the control of one commander is but the plain duty of allied governments since no command can with success be held by a syndicate ; but to send Italian ammunition to British batteries although the calibres may be identical, and to expect the essential vitamins to be absorbed by a Canadian soldier, in the shape of olive oil, are serious errors. Again, the ration which the British nation gives to its soldiers is not that to which a French soldier can suddenly accommodate himself, and precipitately to substitute pinard and coffee in the British Army for the peculiar Atkins brew of tea is to raise the thunder of discontent. A multiplicity of examples may be cited ; they are not obstacles raised by the conservative to oppose reform but are the daily difficulties with which administration is confronted.

An army to fight and succeed in war depends upon two factors in these days of industrialization; instant mobilization and rapid adjustment of factories to the production of war material. To ensure that these factors may obtain it is necessary to create a military organization which will embody the main features of the peace life of the nation. As a nation lives so will it fight, at least during the earlier stages of the war, and even a cursory acquaintance with affairs makes it plain that an army which does not form part of the nation but is superimposed upon it, wages war at an immense disadvantage when compared with a nation in arms. The more closely the administration and the rearward services of an army approximate to the organizations which feed and carry on the trade of the nation in peace, the less will be the friction in the maintenance of large armies, and the better will the infantry be served. Thus the question of aligning the organization of an army closely to that of civil life is one of extreme importance ; it being considerably easier to adjust that organization to the national life in peace than to force the nation in war on to the Procrustean bed of a rigid military organization.

Having outlined the reasons for the employment of various arms and branches in an army, it is now of interest to see in what way and for what reasons modern armies differ from that which has been evolved from pure principle.

The various arms and branches exist together with the various aids but there is considerable overlapping and consequent waste. Also there are considerable differences between the organization of military rearward services and the organization of those services responsible for the provision of food, raw material, and manufactured products for nations as a whole.

Infantry, though possessing their own technique, are unable to move with sufficient speed or dispersion to ensure adequate safety during the attack. This is partially due to a lack of aids. Infantry commanders have but little control of tanks and infantry carrying transport and are rarely provided with adequate anti-tank weapons; neither have they complete control of their transport both horsed and mechanical. Gas, too, is not under their control but there are many and weighty reasons for its non-inclusion. Upon the other hand it may be urged that the organization of infantry is in a state of flux, and in all armies many changes have been effected and many more are contemplated. Also that a suitable vehicle for infantry carriage and for infantry transport requirements is not available in quantities similar to that of horsed vehicles, and the tactics of mechanised warfare are but dimly understood and that the effect upon tactics of the re-orientation of ideas of time and space are often obscured by existing training methods and decisions in so far as may be gleamed from manœuvres and training manuals.

Cavalry have not yet given place to aeroplanes and tanks, and about the use of this arm in the approach march and in battle there ranges considerable controversy. Aeroplanes and tanks of suitable design and capacity are aids to the cavalry, yet the aeroplanes rarely form part of cavalry formations and are often in some cases not even a part of the army. In this organization lie the germs of defeat. Special tank vehicles are in process of construction in all armies which will be of greater service when used in conjunction with the cavalry than those of the infantry pattern. Yet the ability of tanks to search country with the same efficiency as cavalry does not seem capable of demonstration. The inefficiency of aeroplanes in the matter of locating

and distinguishing ground troops when stationary and when dispersed, even in open country, both on the continent and in India, has been conclusively demonstrated in exercises and manœuvres; thus the reports from this source need confirmation and amplification by cavalry and mechanical vehicles working in concert on the ground. As with the infantry, so with the cavalry; unit commanders might with advantage be given a proportion of the aids. In the past the cruder forms of signalling have formed their sole assistance.

Artillery provide covering fire. It is also responsible for the defence of the infantry from their most dangerous foe—the tank. Aids are in every instance unevenly distributed among it and although, subject to the orders of superior authority, it fires gas and other shell, in some instances it neither mans nor controls the aeroplanes which observe for its shoots. Similarly it is not always entirely responsible for the mechanical traction apparatus allotted to it but in other respects the artillery of the larger armies is very well found.

Whilst it is responsible for the care, maintenance, and use of ordnance it is only occasionally intimately concerned with its repair. The method of supply of ammunition differs in every case. The firing maintenance and repair of artillery, the supply, storage and inspection of ammunition are only in one instance the concern of one single branch of the army. Whether within this arm there should be a technical and a fighting section is hotly debated by the infantryman as upon a knowledge of tactical methods and of infantry work his efficient aid is largely dependent.

Engineers provide assistance which is vital for the infantry. They make roads, clear and erect obstacles, build and demolish bridges, run railway trains, make electric light, man steamers and barges and perform many other similar services. Engineer officers very often command infantry and direct their operations in all branches of staffs: their men in some cases also form a reserve to the infantry. History shews that in many armies the aids have at one time had their engineers as sponsors. Thus a somewhat false reputation for omnipotence adds lustre to them and the infantry often look primarily to them for all technical assistance.

Signal Corps are charged with the provision and maintenance of all signalling apparatus and for training personnel of other arms and branches in those forms of signalling which suffice for their needs. In

their position as an aid to the infantry (and also to all other arms and branches) much of their time is absorbed in technicalities, that is, the application of science for the solution of their various problems. This fact results in less time being available for tactical study and a danger that the maintenance of adequate signal communications between units may be subordinated to secondary technical argument is ever present in the mind of the infantryman. This attitude was especially noticeable in the German manœuvres of 1913.

The consideration of the various Medical Corps is a question not within the province of this essay since it deals with subjects which belong more properly to daily life than to war—the preservation of health and the prevention of disease. The tending of gun-shot wounds in war results in the expansion of accident wards to form the various military formations in the field, though it is not to be construed that the sole duties of a medical corps in war are those which concern operative surgery. The provision of their special stores and apparatus is generally undertaken by a line of supply separate from the usual supply and store channels.

With regard to the aids. Gas cannot, owing to its liability to interference by weather conditions, be allotted to all arms; also it entails much apparatus and a certain degree of specialised knowledge for its effective dispersion. Above all in its present form it is only of use in particular situations as it is an obstacle to rapid movement.

Tanks—chars d'assaut—that is vehicles able to cross trackless country and affording protection and varying speeds of movement to its occupants, usually form separate Corps and only in rare instances form an integral part of cavalry and infantry units; thus their uses and limitations are only imperfectly understood by these arms.

Aeroplanes, almost the youngest of the aids are now regarded by all armies as an indispensable factor of success. Interwoven with the strategical and tactical operations of the professional armies, they have become endowed with great offensive and defensive powers; against less coherent opponents they are able to maintain communication with and can supply beleaguered garrisons from far distant bases. The position of aeroplanes in present day armies conforms to no rigid dogma. In one army the machines belong definitely to the military organization; in another they are let out to the army by another department of State; in a third military machines belong to a separate force under a separate department of State and are manned

and administered by other than military personnel. Owing to their speed and ability to move in a third dimension, they combine considerable offensive power with exceptional powers of reconnaissance in favourable weather conditions. These powers in the hands of new and virile forces have in all armies led to extravagant claims for aeroplanes in primitive operations and police duties. The several air corps reinforce their arguments with a claquant denial that ground troops in their present proportions are necessary for the maintenance of peace and the waging of war forgetting that even they themselves are tied to the ground. These short sighted tendencies increase the difficulties of liaison and co-operation.

It now remains shortly to examine the services which are required to supply the food, forage, fuel and paraphernalia required by armies and those which are required for their transportation. These services are all embraced by the word auxiliary and in them is to be found the greatest diversity of organization. For although cavalry, infantry and artillery are well known terms of rigid definition the branches of supply and transport are variously known as l'intendance, train, quartermaster's corps, commissariat and service corps. Up to the last war, in the great professional armies the functions of transport and supply were divorced. Only in the British Army were the supply of food and forage and the provision of horsed and mechanical road transport united in one corps. The reason for this seems to lie in the fact that they were all without exception organised either to repel invasion of their own territory or to irrupt over their neighbours border. Not so the British Army ; it has to start in a friendly country or it cannot start at all, and centuries of experience of administrative difficulties and failures have proved that success was more often achieved when food and forage were provided by the department owning the transport than when separate organizations were responsible for transportation and supply.

The services of Supply embraces food, forage, clothing, laundry material, money, accommodation, baths, labour, accountancy and sometime hospitals and burial arrangements, whilst transport includes all forms of conveyance, even that by air.

Troops are supplied either by—

- (1) Military means—intendance, commissariat, service corps.
- (2) Contract with civilians.
- (3) Assisted contracts with civilians.

Where large forces are maintained in peace and where in war embarkation is not a preliminary to action, it is possible that the peacetime system of provision may continue to obtain. To ensure economy it is vital that this should be so, since to change the system of supply on mobilization is to introduce many disturbing factors and consequent waste. But in no army does one corps or branch concern itself solely with supply whilst a collateral organization assumes responsibility for all systems of transport. Tradition, experience, preconception and vested interest all tend to complicate the rearward services. Though there are many combinations of the services of supply in the various supply corps of armies, the supply of specie is the most involved. Yet as Wellington shewed it is the most important, coin being the best persuasive for supplies. Of the combination of duties of the Supply Corps the most noteworthy are the following :—

- (a) Supplies and clothing.
- (b) Rations and forage, accountancy, equipment in material, land, accommodation and hospitals.
- (c) Supplies barracks and buildings.
- (d) Supplies barracks and wheeled road transport.

Whilst in another case the Quartermaster-General is responsible for all medical, engineer, ordnance, signal, chemical and air warfare, coast artillery, laundry, bathing and cemeterial duties. Thus there is no common doctrine for the maintenance of forces in the field similar to that which governs the action of the fighting arms of all armies. A study of all campaigns since the greatest British military administrative disaster—the Crimean campaign in 1855-6—shews that in every case the services of the respective Quartermaster's General of the staff were unequal to the strain to which they were subjected. It is impracticable to embark upon an analysis of these difficulties still more upon a study of the methods adopted to solve them : it must suffice to say that during this period the strategical conceptions of commanders have in every case proved to be in excess of the administrative capacity of the forces under their command. Strategy was thus subservient to Supply. The passage of time tends to confirm this subservience. All men as they grow older lean more and more heavily on the past, owing more and more allegiance to hoary shibboleths that were made by other men for times other than their own, and forgetting that events which cannot be hindered must be led.

The analyses which have been made and the lessons of the campaigns of the period which have been passed in review, point to the fact that the organization of military forces will in the future tend ultimately to greater simplicity. A corps of infantry—not necessarily foot soldiers—supported by many aids of varying efficiencies and complexities maintained by a supply or maintenance corps performing the functions of provision and transport and controlled by a staff of three branches. One branch responsible for the provision of men, their physical and spiritual welfare, a second responsible for directing their training and operations and a third for providing and maintaining all their impediments and paraphernalia.

VIA GILAN.

By "BILL MARLING."

Not many of us, I venture to think, really enjoy that liverish business of bridge and the bar, daily sweepstakes, watching porpoises, buying postcards at Port Said. And even shooting a line on the boat deck is poor fun compared with shooting duck on a first class jheel.

It is to those who support this possibly heretical outlook that I offer the suggestion of an alternative route homewards. My suggestion may not have the erotic possibilities of a voyage *via*, say, Japan or Hawaii; it may lack the comfort of a *wagon lit* on the Grand Orient Express, but it has the advantage of comparative novelty, the romance of ancient history permeating one's passage, variety of terrain and experience, and a certainty of sport to be had not far off one's direct route.

Moreover, to those who, like myself, have a decided aversion to casting their daily bread upon the waters it has the incomparable advantage of reducing the sea passage to a minimum. Nor need it be prohibitive in expense.

From Nok Kundi, the present railhead of the Quetta—Duzdap (Zahidan) railway, one may motor the entire distance to Beirut or Constantinople, as all the world knows. It is not the purpose of this article to give details of the alternative overland routes open to the traveller; nor is it intended to imply that his passage through Persia will be devoid of difficulties. But it has been done before. People frequently surmount those little troubles regarding passports, inoculation certificates, customs deposits and car permits, and in some cases have eradicated the last by not taking a private car at all.

In this modern age which knows not Kipling, buses do run from the Bank to Mandalay—or nearly so—and the Duzdap-Birjand-Meshed-Tehran portion of the route is traversed daily by Dodge and Chevrolet trucks, all delighted for a remarkably small sum to take you anywhere.

Rosita Forbes has described this form of travel in detail (*Conflict. Angora to Afghanistan.*) and the journey by private car has had part of a book (*From China to Chelsea*) devoted to it by Captain D. McCallum. It would therefore be redundant to stress

the wayside details here. It is, however, as well to recall that time is still as unimportant to the normal Persian chauffeur as it is in general in the Orient ; that mechanical perfection or imperfection is comparative ; that the state of the road is dependent on anything from the vagaries of the season and the melting of the snows on the mountains to the projected visit of a Supreme Personage. Drivers may not all be entirely unaware of the properties of the poppy seed nor be on the best terms with the road guards ; brigands may still occasionally be encountered. Delays must therefore be expected and patience wait upon adversity.

Let us, with the prerogative of retrospect, gloss over the incidents of the first part of the journey, forget those nights spent with Keatings in wayside *chaikhanehs*, pass, perhaps, the scene of the capture by Turcomans of that inimitable clown, Hajji Baba of Isfahan, and arrive on about our eighth day at Tehran, Centre of the Universe.

It is from Tehran that we are to set out for the duck so preferable, as we have already stated, to those of the boat decks of sea going liners, and it is there in its Europeanised shops that we may complete our commissariat and other arrangements for our shoot. A friend may even be persuaded to get a reply by wire from the Caspian on the duck situation, for the duck are migratory and the height of their migration must be caught for a real first class shoot.

The best time is the middle of March and October when they fly in their thousands across the Caspian to or from their breeding grounds in Central or Northern Russia. To get at them we shall have to diverge some 130 miles or so from our direct road to Baghdad and follow the main motor road from Tehran to the little red-roofed town of Resht, capital of the province of Gilan.

The Persians have a saying:—"If you wish for death go to Gilan," and certainly the climate hallmarks the inhabitants with the pallid complexions and emaciated bodies of fever. Quinine is an essential part of our equipment for even the shortest stay there.

From Tehran to Resht is roughly 200 miles over a metalled road much used by motor and *fourgon* traffic. It is possible to do it in the day—a long, tiring day as the latter half of the drive down the northern slopes of the Elburz mountains is tortuous and dangerous, though pretty in the extreme.

Kazvin is only 90 miles from Tehran and is the town where the Resht and Baghdad roads bifurcate. It is as well for comfort to leave Tehran after luncheon and make Kazvin, with its comparatively civilised hotel, an intermediate stop for the night. If there is time to spare one might even visit the "Starling Well", water from which if placed in a pot and hung in a tree is reputed to summon friendly starlings by the thousand to destroy locusts. It seems an unwisely conferred blessing really for the Kazvini is known throughout Persia as the biggest rogue in Shiadom. "If you see a snake and a Kazvini, let the snake go, kill the Kazvini," goes the Persian jingle. Certainly the writer's experience can support the saying as his refusal to take a local chauffeur resulted in the discovery when he went to the garage to start the following morning, of inexplicable punctures in all four tyres. Unfortunately no snake or companion was visible.

From Kazvin the road climbs up the bare southern slopes of the Elburz barrier and as it leaves the stony aridity of the Central Iranian plateau dips over the watershed to the Menjil bridge. This bridge was the scene of fighting when British troops operated in North Persia from 1918 to 1920, and an abandoned English steam roller lying in the ditch still served in 1927, when the writer last passed that way, of days when British soldiers were rationed with caviar and rejected it as 'fish jam'.

Menjil has a further justified claim to fame as the windiest place in the entire Persian Empire. The *Safed Rud*, very muddy and far from living up to its name of White River, swirls through a gorge which forms a funnel for all the winds of heaven.

As the road descends further the entire aspect changes. The bare hills of the plateau give place, in their higher altitudes, to pine clad forests reminiscent of Switzerland; lower down the village of Rudbar nestles amongst groves of olive trees which in turn give place to thick, magnificent forest of beech and oak. Damp green walls rise on each side of the road and provide a gloriously restful change to eyes and nerves strained by the rarity of the plateau atmosphere. A luxuriant plant life covers all with lichen, moss and fern. Primroses and violets carpet a tropical chamber with homely mosaics, brambles and clematis hint of the final locality of our home leave.

Habitations are no longer of sun-baked mud but are timber and rush cottages riding upon roughly hewn timber. Roofs are substantial thatch over which growing gourds spread their large leaves. A rice

patch reclaimed from the bramble and alder surrounding it forms a setting for the laddered building.

As the Caspian is approached tropical forest gives way to alluvial country and among the brambles and alders stretch the rice fields of Gilan. The tang of distant salt water is noticeable.

If duck is the primary reason for our visiting Gilan the objective must be the *Murdab*, an inland sea about 25 to 30 miles long by six or seven broad, into which scores of rivers empty their waters before mingling with the Caspian Sea. At its North-Western extremity is an outlet to the Caspian with the port of Pahlevi (late Enzeli) on its Western side and Kazian on that of the East.

Fishing boats from Resht's waterside suburb of Piri Bazar float gently down stream until debauching onto the *Murdab* itself where *lutkas* will serve to propel the 'guns' up smaller channels after game.

Here amongst the marshes and flats of the *Murdab* one may see, while the migration is on, duck, geese, snipe and waterfowl of every conceivable breed and, if lucky enough to have struck the psychological moment, fire until barrels grow uncomfortably hot and cartridges run out. Swans, flamingoes, pelicans, ospreys, sea-eagles are all to be seen here and amongst the brambles growing in black, slimy ooze is to be found the English pheasant in his original home.

The shooting of the latter is an operation of considerable difficulty as he lives in thorny cover which is often impenetrable. The going is knee-high slime, exceedingly heavy, and often the birds refuse to rise at all, merely running from cover to cover. Trained dogs are quite essential if anything of a bag in the pheasant line is to be contemplated. This is, of course, a difficulty for a traveller merely passing through; but there used to be a friendly and sporting Greek gentleman in Resht who bred pointers and trained them for this particular form of shooting. Excellent they were too.

The question of dogs and other points regarding permission to use any of the many fowlers' huts on the shores of the *Murdab* could be answered by the local British Vice-Consul, if one still exists in the unpopular and unhealthy post of Resht, or at Tehran. Consular officers in these lonely posts usually seem all too pleased to see a new face and are universally helpful.

Most of the ground round the *Murdab* used to belong to *Firman Firma* whose local agent was the Greek already mentioned; but much

has happened since 1927 and permission may well be required from another now.

Down on the shores of the *Murdab* life in one of these thatched huts is really delightful. In March the fish are running. Floating down from Piri Bazar the boat slides over a practically solid mass of fish all fighting their way up stream to spawn. Every stream has its wicker dam with, at one bank, a re-entrant. The fish swarming up stream meet the dam, take the line of least resistance and are shepherded in congregation into the re-entrant. Over them in a thatched shelter sits a Gilaki dipping a net with rhythmic monotony into the seething mass below. Behind him grows and ever grows a shimmering pile which will eventually be dried or smoked and sent into the interior.

Being no fisherman I am unaware what the *mahi safed* really is. I can, however, testify that he is remarkably good eating.

Fresh green caviar, *mahi safed* braised over wood embers, teal or duck or pheasant treated in like manner, melon by way of desert, and grilled snipe as a savoury, all washed down with M. Georgi's *mandarinovka*, which, as far as I could gather, was a concoction of tangerine brew and vodka.....People feed worse in Paris, I'll swear, and certainly do not get fresh caviar, straight from the sturgeon's roe, at a couple of shillings or so a pound. Those who have not eaten absolutely fresh caviar do not know what caviar can be and those who have are spoiled for ever for the stale, metallic-tasting stuff they offer in civilised restaurants at fantastic prices.

Russian influence is very marked in Gilan. The fisheries at Kazian were a Russian concern; many of the shops have their signboards in those intriguing Russian characters; large modern lorries of the Russtransit Company thunder through the streets on their way to spread trade in Soviet wares in the interior. Petrol normally comes exclusively from the Baku oilfields over the way, and in 1927 the economic pressure of Gilan's northern neighbour was emphasised by the presence of a gun-boat from the Soviet Caspian patrol permanently moored at Kazian.

From its geographical situation Gilan is economically dominated by Russia, and whether the opening of the Tabriz-Rowenduz route and the eventual completion of the North-South railway will relieve the situation is a question for the future to decide.

Among other things the Caspian can provide excellent sea bathing from a sandy beach. Whilst on this subject it may be as well to reassure people that the local bathing habits are not, as was erroneously reported to the writer, those of parts of the Baltic. Nudists were nowhere in evidence.

Ten days should be ample for our shoot and is as long as the height of the migration is likely to last.

A day or two in exploration will not be unprofitable. Lahijan is a picturesque little brick-built, cobblepaved town which in the days of Shah Abbas saw the landing of a British Envoy. It is now some 15 to 20 miles inland. There is also some form of duck snaring which I was not lucky enough to witness. From accounts it seems that the local fowler lulls the birds to sleep or hypnotises them with a light at night or by noise, on the principle of making bees swarm (I imagine), and then just picks them off the water.

We shall finally have to decide on whichever homeward route our diplomatic relations with Russia or inclination decrees.

The bi-weekly Soviet boat to Baku and train *via* Moscow will land us in London within the week. Conditions of travel appear to be fairly normal and reasonably comfortable. Ladies and an infant did the journey in 1927, the fare being, as far as memory can state, about £35/- to London for a single ticket, first class on the boat and second class by rail.

If Junkers still run their air service in Persia, which I understand is possibly not the case, the alternative of flying from Pahlevi to Baku and thence by Soviet and German planes to London *via* Moscow and Berlin is open to the air-minded. The complete fare from Tehran to London used to be advertised by Junkers as £50/-.

In any case boat to Baku and aeroplane for the rest of the journey remains a possibility.

Otherwise the Resht-Kazvin road awaits the traveller's retraced footsteps and leads him back to the five hundred odd miles of main road to Baghdad and thence to the dessert and Beirut.

In either case he has had his fun, seen a fresh part of the globe, and is not constrained to refuse invitations to play bucket quoits or shuffle board until leaving Beirut. Nor, if Persian roads are what they were, has he failed to jog the liver.

MILITARY NOTES.

BELGIUM.

Revival of rank of Capitaine Commandant.

By Royal Decree dated 18th October, 1932, the old rank of *capitaine commandant* has been revived, but without any additional pay. Captains performing the normal functions of their rank will in future be promoted to the rank of *capitaine commandant* at the latest after 17 years commissioned service, and at the earliest during the year in the course of which captains belonging to the arm in which promotion is the quickest at the time attain six years service in the rank of Captain. This decree applies to officers of the *Corps des Transport* and of the *Services*, as well as to those of the various arms.

Retirements.

General Galet, the Chief of the General Staff, having reached the age limit (62), retired on 26th December. He has been decorated with the Grand Cordon of the Order of Leopold. His successor is Major-General Nuyten, the present Deputy Chief of the General Staff. Colonel Vanden Bergen, commanding the 14th Regiment of Artillery at Brussels, has succeeded Major-General Nuyten as Deputy Chief of Staff.

Another retirement of importance which has just taken place is that of Lieut.-General Thirifay, Commanding Engineer and Fortification Troops. He is succeeded by Lieut.-General Blancgarin, the late Commander of the 1st Group of Engineer and Fortification Troops.

Exemptions from service of 1933 Class.

In accordance with the Recruiting Law, recruits fulfilling the following conditions will be excused service during 1933:—

- (i) Those belonging to a family of not less than six children still living, of whom no other has so far been exempted from service.
- (ii) Those of whom not less than three brothers have served in the army.
- (iii) Those who have had two brothers in the army, of whom one has died during his service.
- (iv) Those who have had two brothers in the army, of whom at least one is the wearer of chevrons for service at the front.

- (v) Those belonging to a family of not less than nine children still living, of whom two have served in the army.
- (vi) Those belonging to a family of eight children still living, of whom five are boys, among whom two have served in the army.

Gendarmerie Reorganization.

By a recent decree the mobile and instructional legion, as also the mobile squadrons at Brussels, Mons, Namur, Liège, Antwerp, Ghent and Bruges, are abolished as autonomous units and united in one mobile legion under the command of a general or colonel and consisting of three groups—one at Brussels, one at Antwerp and one at Charleroi. Each group will consist of three cyclist squadrons and one horsed squadron—about 500 men in all. From the Charleroi group one cyclist squadron will be detached at Liège. The school squadron at Brussels is retained.

This change does not affect the total strength of the *gendarmerie* which remains at 152 officers and 6,289 other ranks.

Formation of new Ministry.

On 23rd October a new Government was formed by Monsieur de Broqueville which might well be christened a Government of all the talents, comprising as it does no less than four ex-Prime Ministers.

Monsieur Crokaert has been succeeded at the Ministry of National Defence by Monsieur Theunis.

Before his resignation Monsieur Crokaert addressed an order of the day to the army as follows :—

“ The army which covered itself with glory during the war has since then given evidence of a magnificent effort to increase the security of the country. Generals, officers, N.-C.Os. and soldiers vie with one another in their zeal to this noble end, and my short stay at the Ministry of National Defence has enabled me to become better acquainted with this fact and to offer myself as a witness to its truth. I am very happy to think that the country possesses such men to guarantee its greatness, its power and its independence.”

In speeches which he has made since leaving the Ministry of National Defence, Monsieur Crokaert has given further expression to the same sentiments.

Officers' uniform.

The date by which officers are obliged to be in possession of the blue undress uniform has been postponed from January, 1933, to January, 1935.

CHINA.*Situation in Manchuria.*

On 1st December, after they had failed to negotiate the release of their captured nationals, the Japanese troops began a general offensive against the insurgent general, Su Ping-wen. After slight resistance, the Chinese forces withdrew westwards along the Chinese Eastern Railway; this enabled the Japanese to occupy the important railway tunnel through the Great Khingan Mountains. By 6th December, the Japanese had occupied Manchouli railway station, which is on the frontier. General Su crossed into Soviet territory, accompanied by some thousand of his troops. Other remnants of his forces crossed the frontier elsewhere and were disarmed by the Soviet authorities. The latter have refused the Japanese request that General Su should be handed over to them.

On 1st December the Japanese Government announced that, from that date, the status of their Special Envoy to Manchukuo (General Muto) had been raised to that of Ambassador Extraordinary and Plenipotentiary.

Situation in North China.

On 8th December, an incident occurred at Shanhaikwan (which is on the Peking—Mukden railway just inside the Great Wall) when a Japanese armoured train was fired on by the local Chinese garrison, and returned the fire. Fortunately, the incident did not develop and both the Chinese and Japanese Commanders on the spot appear to have done everything possible to settle the affair by negotiation.

*The situation in China proper.**General.*

In China proper there have been few developments in the general situation. In the North, Chang Hsueh-liang remains loyal to Chiang Kai-shek, and he recently assured Chiang of his ability to maintain order amongst the northern leaders.

The minor civil war in Shantung, between Han Fu-chu and Liu Chen-nien, has terminated after prolonged negotiations. In Szechwan,

fighting continues between the Provincial Governor, Liu Wen-hui, his nephew Liu Hsiang, who controls Chungking, and another satrap ; but there are reports that a truce is being arranged. Hostilities between Szechwan and Tibetan troops appear to have ceased, but Kansu troops are now reported to be attacking Tibet.

In South China, Chen Chi-tong, the Military Governor of Canton, seems to be drawing closer towards a definite alliance with Chiang Kai-shek. Meanwhile, he continues his efforts to strengthen his own position in the South.

The Third Plenary Session of the Kuomintang (Chinese Nationalist Party), which has been postponed from time to time, is to meet at Nanking on 15th December. His enemies are working for regional control, as opposed to central control under Nanking. Chiang's internal policy is apparently to consolidate his position in the provinces around the capital and to retain control, through his own nominees, of the Ministries of War, Finance, Foreign Affairs and Communications, in addition to the Executive Council of which T. V. Soong (his brother-in-law) remains in temporary charge.

FRANCE.

New Minister of War.

Monsieur Daladier has been appointed Minister for War in the new Government formed with Monsieur Paul Boncour (the ex-War Minister) as Prime Minister.

M. Daladier was born in the Vaucluse in 1884. He is a school-master by profession, and has sat for the Vaucluse in the Chamber of Deputies since 1919. He is an active Socialist-Radical, belonging to the Left of the party, and was Minister for the Colonies in the Herriot Government of 1924-25, Minister for War in the Painlevé Government of November, 1925, and Minister for Education in the Briand Government of November, 1925, to March, 1926. In October, 1927, he was elected to the presidency of the Socialist-Radical party in succession to Monsieur Maurice Sarraut ; in January, 1930, he was replaced by Monsieur Chautemps as president of the Socialist-Radical group in the Chamber (though not of the party). In February, 1930, he was Minister of War in the Chautemps Government which resigned after its first debate in the Chamber, and he was Minister of Public Works in the late Herriot Government of June, 1932.

Economy Committee.

In order to give effect to the stipulations of the Law of 15th July, 1932, relative to budget economies, a *Comité Supérieur d' Economies et de Commissions Tripartites d' Economies* has been set up under a decree dated 22nd October. A commission will be set up in each government department and will submit proposals to the committee for the simplification of administration, reforms in routine, revision of personnel, and reductions which it is possible to make in the latter. The reports of these commissions are to be submitted before 28th February, 1933.

Formation of an Air Section at the Military College, St. Cyr.

Last month saw the formation of an Air Section at the *Ecole Spéciale Militaire de St. Cyr*.

This section is organised as follows :—

Command—

1 major.

2 captains or lieutenants.

Squadron (eight 2-seater war type machines)—

1 captain (O. C. Squadron).

4 non-commissioned officers (pilots).

36 other ranks.

Cadets selected for this section must be volunteers and have completed their first year at St. Cyr. On leaving St. Cyr they will go to the Air Force School at Versailles to undergo a year's technical instruction before being posted to their squadrons.

22 cadets have been selected for training during the year 1932-33.

Army reorganization.

In view of the approaching completion of the French frontier fortifications, certain measures of reorganization in the French infantry have recently been decreed and will come into effect by the end of the summer of 1933.

As a result of this reorganization French infantry regiments will in future be of five types and of seven different peace establishments.

These types with their peace establishment are as follows :—

<i>Type normal</i>	..	..	..	1,576
<i>Type renforcé No. 1</i>	..	..	..	2,285
<i>Type renforcé No. 2</i>	..	..	..	1,754
<i>Type mixte</i>	..	..	..	2,297

Type région fortifiée—

(a) Having 6 battalions <i>type région fortifiée</i>	..	2,919
(b) Having 4 battalions <i>type région fortifiée</i> and 1 battalion <i>type normal</i>	.. ..	2,437
(c) Having 3 battalions <i>type région fortifiée</i> and 2 battalions <i>type normal</i>	.. ..	2,421

Regiments of the *type normal*, *type renforcé* No. 1 and *type renforcé* No. 2 will have the normal organization of three homogeneous battalions. Regiments of the *type mixte* will consist of four battalions, of which two battalions will be of the *type renforcé* and 2 battalions of the *type normal*. All battalions of the above four types of regiment will have the normal organization of one machine gun company and three light automatic and rifle companies and will differ only in their peace establishments.

The battalions of the *type région fortifiée* represent an entirely new type of organization, designed to allow these battalions to occupy the frontier fortifications. Each battalion will consist of 4 companies each of 2 machine gun sections and 1 light automatic section; a machine gun section consisting of 2 groups each of 2 guns and a light automatic section consisting of 4 groups each with 1 light automatic. A total of 32 machine guns and 16 light automatics per battalion.

Changes in Command and Staff.

1. The following general officers have been appointed members of the *Conseil Supérieur de la Guerre* with effect from the 19th November, 1932 :—

Général de Division A. J. Georges, Commanding the 19th Army Corps, Algeria, vice General Gouraud, supernumerary on attaining the age of 65 years.

(General Georges is maintained temporarily in command of the 19th Army Corps.)

Général de Division J. C. Duchene (formerly G. O. C., 13th Region, Clermont-Ferrand), vice General Naulin, deceased.

2. General Brecard, Member of the *Conseil Supérieur de la Guerre*, Military Governor of Strasbourg and Inspector-General of Cavalry, retired on 14th October, 1932. The three appointments held by this general officer have been distributed as follows :—

Général de Division C. Walch, Member of the *Conseil Supérieur de la Guerre*, to be Military Governor of Strasbourg.

Général de Division J. J. Carence, G.O.C. 15th Region, to be a Member of the *Conseil Supérieur de la Guerre*.

Général de Division M. R. Altmayer, G.O.C. 8th Region, to be Inspector-General of Cavalry.

MOROCCO.

FRENCH ZONE.

Operations and pacification (vide Times Atlas Plate 77).

This year's campaign closed in the Great Atlas in mid-September, and operations are not likely to recommence until the end of next March. Good weather in September facilitated the making of the tracks necessary to stock the advanced posts, which are at a height of from 6,500 to 9,000 feet, with a seven-months' supply of ammunition and provisions.

The year's operations have halved the dissident area, and all Morocco which Marshal Lyautey described as being "useful" has now been occupied. The only two areas, whose pacification still remains to be accomplished, are :—

- (a) The extreme south, beyond the Jebel Sarro and the Anti-Atlas, on the borders of the desert.
- (b) The summits of the Great Atlas.

In the former area, an unopposed advance was made, early this year, to the line Tizert, Agadir Tisint. The Akka oasis (Wadi Akka), a very picturesque district which is expected to attract tourist traffic, was occupied on 25th April.

The remaining area in the Great Atlas is about ninety-five miles from north-east to south-west, that is to say parallel to the mountain ranges, and about fifty-five miles across. It forms the watershed between the Atlantic and the Sahara and consists of a tangled plateau, whose average height is about 7,000 feet and which rises at its north-eastern end to Jebel Ayachi, 13,000 feet.

Here live about 20,000 families, who eke out a precarious livelihood in stock-rearing and cultivation of the Wadi bottoms, supplemented by the spoils of raiding. The chiefs, who are elected annually, have considerable difficulty in maintaining sufficient order for the transac-

tions in their few markets. *Marabouts*, the holy men of a simplified form of Mohammedanism, use their influence to encourage a fierce hatred of the invader.

The operations of early 1932 effectually separated the two dissident areas. Advancing from the Tafilalet oasis, which had been occupied by the end of January, General Giraud, commanding the Morocco-Algerian Border Force, effected a junction at Todgha with the troops of General Catroux advancing from Marrakech, so reopening the Marrakech—Bou Denib route and completing the encirclement of the Great Atlas. A few islets of resistance remains within the French lines, but their surrender is now merely a matter of time.

With the coming of spring, an offensive was opened on the northern front, the object of which was to bring pressure on the Aït Haddidou, the powerful tribe who occupy the central mountain massif. With this end in view, operations were begun against the Aït Isha, Aït Shokmane, Aït Yahia and Semgat, who are the neighbours of the Aït Haddidou on the west, north-west, north and east respectively.

The method employed was one of penetration and encirclement, in order to minimize the loss of life and damage to property except when retaliation was called for. The objectives were such vital points as exist in each district, namely the areas of cultivation or of habitation in the Wadi bottoms, the upland pasturages, the track junctions and markets.

On 10th April, the Meknes column (General Goudot), passing between the Jebel Masker and Jebel Ayachi, made contact with a detachment of the Border Force advancing from Rich. The Jebel Ayachi, whose southern valleys are most fertile, was thus detached from the main dissident area without a shot being fired.

Advancing from Mzizel in mid-April, columns of the Border Force occupied the Semgat country, and by 22nd July, had penetrated to Od Tarbat in the Haddidou country.

On 13th July, the Tadla column moved southwards in three bounds through the Shokmane country, in co-operation with the Meknes column from the north-east and a column from the Aït Isha country in the west. By 14th August the Plateau des Lacs, for long the base of sheep-lifting raids as far as Midelt and Tadla, had been occupied.

This ended the tasks projected for the year's operations, but an unexpected windfall was in store for the French. Towards the end of

July a number of tents had been sighted west of the Jebel Tazizaout, some miles north of the Plateau des Lacs. After the congratulatory telegrams on the season's operation had already been exchanged, it suddenly came to light that this concentration consisted, in fact, of some 3,000 tents, whose occupants included the unsubdued elements from all the Middle Atlas tribes, who expected no pardon and were further steeled to resistance by a legend which prophesied that at Tazizaout would be decided the fate of Berberine independence. At their head was Sidi el Mekki, a leader whom the French had constantly found confronting them.

Emissaries sent to parley returned with their hands cut off. The blockade was tightened, and General de Loustral was put in command of both Tadla and Meknes columns. The key to the situation was the Tazizaout, a rocky mountain whose lower slopes were clothed in trees and shrub, which afforded excellent cover from ground and air observation. On 4th September a battalion of the Legion was sent by night to the foot of the only track which ascended the mountain. This was found to be impassable for mules, and their machine guns had to be carried by hand. By the fourth day they had reached the pass and moved along the crest line to the position assigned to them, which they lost no time in consolidating. Here for four days they were almost continuously attacked, while desperate charges were also launched upon the main columns. The losses of the battalion included three officers killed, but on 11th September they were able to renew their advance. On the previous day Sidi el Mekki, accompanied by several Sheikhs, entered the French lines and offered to surrender 1,500 tents, 2,000 fighting men and 4,000 rifles. This he carried out two days later. Sidi el Mekki's two brothers, who were also his lieutenants, had been killed in the fighting.

This submission should have considerable consequences. The Ait Haddidou, who were hostile to Sidi Mekki, had previously announced that if the French were successful in reducing his following, of whose depredations the Ait Haddidou themselves were considerably afraid, they would submit. Submissions in the Plateau des Lacs district up to 20th October totalled some 23,000. The physical condition of those who surrendered was deplorable. The French sanitary formations were busily engaged, while flying missions carried out wholesale inoculations and vaccinations. These ministrations help, no doubt, to efface bitterness. Some 30 of the more severely wounded insurgents

were taken by lorry to Midelt, where the French have established a treatment centre. They were amazed at the electric lighting and other amenities of civilization which they had never before seen and were still more amazed to be given clean clothing, as they thought they were being taken to Midelt to be executed.

French casualties in the operations were slight and fell mostly on the irregular native troops. Use was made of night advances to reduce casualties, and much information was obtained from the air. Although the remaining insurgents include unsubdued elements from the whole of Morocco, it is expected that the next campaigning season will see resistance at an end. During the winter the blocaded will tell on the tribes who have not submitted, while, amongst the Ait Moghad, French agents are also at work.

In the extreme south of Morocco, on the Algerian border, advantage was taken of good weather in October and November to occupy a further area. Advancing southwards down the Dra Valley from Zagoura, 30 miles south-east of Rebat, the Marrakech Mobile Column effected a junction with a column of the Border Force, which consisted of a camel company and mechanised elements, near the bend of the Dra. The latter had marched 125 miles westwards from the Oasis of Tabelbala. The operation was completely successful and resulted in the surrender of the local dissidents. No fighting seems to have taken place and no casualties are reported.

INDO-CHINA.

Appointments.

The term of command of General Billottee comes to an end early in 1933 and that of General Vallier in December, 1932.

General Legendre has replaced General Mouchet as Commander of the Artillery in Indo-China.

Brigadier-General Crepet has replaced General Barbassat, who died on manoeuvres.

Foreign Legion.

The effectives of the Foreign Legion in Indo-China have been practically halved. A battalion has left for Algeria. The Foreign Legion has been entirely withdrawn from Annam, and is now stationed in the four Tonkinese garrison towns of Veitri, Dap-Cau, Tong and Tuyen-Quang.

IRAQ.

The Assyrian Situation.

Since the levy disturbances in July of this year there has been little change in the Assyrian situation as a whole. It will be remembered that in June a petition, signed by the Mar Shimun and many of the leaders of the Assyrians in Iraq, was forwarded to the League of Nations. In September a counter petition was prepared, in which the signatories declared that the previous petition did not state the true facts, that it had not been prepared by persons who were truly representative of the Assyrian community and that they, the signatories, were satisfied to live under the Iraq Government and desired no change. This petition, to which there were a large number of signatories, was forwarded to Nuri Pasha for transmission to the League of Nations. It later transpired, however, that the majority of the signatories were not aware of the contents of the document to which they affixed their signatures, and that those who did for the most part belonged to the sections of the Assyrian community who had never been dispossessed of their lands but had lived throughout south of the Brussels line.

These two petitions were considered by the Permanent Mandates Commission of the League of Nations on 6th November, who referred them to the Council and drew attention to the importance of finding for the Assyrians a compact and suitable region, in which they might be settled. The Council were due to consider the petitions on 21st November, but no decision has yet been published.

Meanwhile the Iraq Government are making efforts to find suitable areas for the settlement of the Assyrians. A Committee was appointed in August and has already selected certain areas in the Amadia district, which have been approved in principle by the Iraq Government. These areas will, however, require the expenditure of some £13,000 on irrigation before they can be considered as entirely suitable, and an irrigation expert has been sent up to examine and report on the scheme.

The Iraq-Syrian Boundary.

The League of Nations Boundary Commission, which had been appointed earlier in the year to examine and report on the most suitable frontier between Syria and Iraq, in due course presented its recommendations, which, on 25th November, were adopted by the Council of the League of Nations.

The main points of difference between the Anglo-Iraqi and Franco-Syrian proposals were concerned with two areas. The first of these was the Kara Chok Dag, a mountainous area at the northern extremity of the boundary and on the southern edge of the "Bec du Canard." Each disputant was anxious for this area to be included in its territory, the Anglo-Iraqi contention being that strategically it lies astride the most direct and most practical route into Iraq from the north, and with the Zakho range on the east bank of the Tigris forms a strong forward defence system. The Franco-Syrian contention, however, was that, stripped of the Kara Chok Dag, the "Bec du Canard," already a very narrow strip of territory, would be quite indefensible. The decision of the Boundary Commission was a compromise between the two demands but included the Kara Chok Dag in Syria.

The second of the disputed areas was the Jebel Sinjar, a range of mountains running east and west and situated some 100 miles west of Mosul. Ethnologically this area forms a homogeneous whole inhabited by the Yezidis. The Franco-Syrian proposal was that this area should be divided by the frontier, whereas the Anglo-Iraqi demand was for its inclusion complete within Iraq. This latter view both strategically and ethnologically was clearly the sounder and in the main was accepted by the Boundary Commission. In the proposed alignment, however, they have skirted the Jebel Sinjar more closely than had been proposed by the Anglo-Iraqi delegates with the result that the only road suitable to wheeled traffic, which passes round the western end, will now be partly in Syria. As a result Iraqi traffic between the main town on the north side and that on the south will be compelled to make the long detour round the eastern end of the Jebel Sinjar.

Taken as a whole, therefore, the alignment can be said to be a just compromise between the demands of the two countries, though not a solution, which is entirely satisfactory to Iraq.

ITALY.

Military obligations of the civil population in Libya.

A recent Royal Decree lays down that, in the event of general or partial mobilization, Libyans who are physically fit for service and permanently resident in the Colony are obliged to undergo military service with regular or irregular units of the Royal Corps of Colonial

Troops. The liability to military service in the case of nomad tribes is limited to contingents as may be determined by the Governor.

The names of Libyan citizens who have voluntarily served in regular Colonial units will be compulsorily inscribed on the register of reservists and they will be liable to rejoin the colours on mobilization.

It is further laid down that the age limits for liability to military service will be from 16 to 60 years of age, subject to the proviso that only men under 45 will be allotted to first line formations.

The decree also includes an announcement that the laws in force in Italy governing the requisitioning of animals, vehicles, motor-cars and other means of transport are extended to Libya.

Courses of instruction for Reserve Officers.

According to a decree recently issued by the Ministry of War courses of instruction for reserve officers are to be held from November 1932 to March 1933.

These courses are primarily intended for reserve officers of and below the rank of captain who belong to 1st line formations. 2nd lieutenants must pass one of these courses successfully in order to qualify for promotion. Lieutenants and captains must pass two courses while holding their respective ranks.

It is laid down that the arrangements for the courses are to be made by Corps and Divisions and that they should be held at regimental or battalion headquarters. In the larger towns several courses may be held including separate ones for the various arms, but in smaller towns only single collective courses for all arms are contemplated.

The courses are designed for the instruction of reserve officers in elementary tactical principles, and in order to give them practice in commanding platoons and companies or corresponding units. The latter object is attained by means of about a dozen practical exercises on the ground with troops, each of 3 or 4 hours duration. Practical instruction is also given in the firing of machine guns, trench mortars and the 65-mm. infantry close support gun.

Exercises are as a rule held on Sundays and holidays, whilst the theoretical part of the courses, consisting of 15 lessons each of about 1 hour's duration, are held in the evenings.

The study of foreign languages by officers of the army.

A recent Ministerial Decree states that a competitive examination will be held during 1933, open to officers on the Active List, for the purpose of selecting suitable candidates to be sent abroad for language study in England, Germany and Yugo-Slavia.

The period to be spent abroad is 5 months in each case and 2 officers are to be sent to London, 4 to Berlin and 6 to Belgrade. It is further stated that some of these officers will be attached to units in the British and German armies, but no mention is made of any attachment to Yugo-Slav units.

Budget Estimates for 1933-34.

During December the Council of Ministers examined the provisional Budget Estimates for the year 1933-34. It is proposed to reduce the total expenditure on the fighting services by 578 million lire, which represents a reduction of approximately 11 per cent. Proposed Army cuts amount to 340 million lire, or 11·4 per cent. ; Navy cuts amount to 180 million, or 12 per cent. and Air Force cuts to 58 million, or 7·7 per cent.

Training Programme, 1932-33.

Instructions governing the second period of training for the current year have recently been issued by the Chief of the General Staff. They are practically identical with those of last year, the main points of difference being in connection with officers' training and tactical exercises.

Special attention is to be paid to the physical training and training in fencing of officers of all arms and services ; to riding instruction for officers of all combatant branches, and to theoretical and practical instruction in M. T. for officers in all mechanized regiments, including Cavalry and Bersaglieri.

It is laid down that tactical exercises without troops are to be carried out by Divisions, Corps and Armies. They are to be designed so as " to give practice in applying the rules for the employment of the various arms and for the working of the services." In addition, Divisional exercises are to include the co-operation of Divisions with Corps and Army troops stationed in Divisional areas.

The Army tactical exercise represents a new departure and it would appear that the handling of the higher formations is to be more

thoroughly studied than in the past, both on its tactical and on its administrative side.

SPAIN.

Army Estimates.

The debate on army estimates for 1933 occupied Parliament on the 18th and 19th of December. Opposition was raised at the increase in the vote, which amounts to £250,000 more than for last year, more especially since the large figure for pensions for officers retired on full pay (106 million pesetas, *i.e.*, £2,650,000 at 40 pesetas to £) is no longer included in the military estimates, but has gone to swell the figure for the Ministry of Finance. The Government, however, obtained the support of the Socialists and succeeded in getting the estimates passed without amendment.

In his speech during this debate the Prime Minister, Señor Azaña, virtually said, "Scrap the army and navy if you like, but no half measures. Spain's dignity needs to be satisfied. War is not impossible at all." He then dealt with policy and achievements, condemning a professional army as too expensive and emphasizing the need of numbers to permit the training of officers and commanders. He stated that he aimed at using the active army as the basis of expansion on mobilization. "Spain" he said "should eventually be able to rely upon a million trained soldiers."

Army Administration.

An order has been published on 10th December to the effect that in future the military command of the Canary Islands will come under the 1st Inspectorate-General, and that of the Balearic Islands under the 2nd Inspectorate-General.

Release of General Goded.

General Goded, former Chief of Staff, imprisoned on suspicion on account of the August revolution, was released from the military prison, Madrid, on 9th December.

National Budget.

The figures published so far show the largest estimate of expenditure, *viz.*, 4½ milliard pesetas (£100 million) that has ever been presented to a Spanish Parliament for a single year's national programme. In

spite of the proposed introduction of income-tax, a deficit of $\frac{1}{2}$ milliard pesetas (over £10 million) for the year is expected ; this is to be met by floating new loans. The army estimates show an increase of 22 million pesetas (nearly £ $\frac{1}{2}$ million) largely due to hospital and barrack improvements. The Minister of War considers the army estimates as inadequate, especially as he intends to re-arm and re-equip the army.

JAPAN.

The Financial Situation.

The draft Budget, for the financial year 1933-34, was presented to the Cabinet on 18th November. The total estimated expenditure is Yen 2,237 million, while the revenue is estimated at Yen 1,341 million, leaving a deficit of Yen 896 million (equivalent to £90 million at par). It is reported that this deficit is to be met by loans.

Army expenditure is estimated at Yen 447 million, which is an increase of more than one-third over expenditure for 1932-33 and almost double that of 1931-32. The Navy estimate amounts to Yen 372 million. These estimates include a sum of Yen 186 million for operations in Manchuria, of which the Army requires Yen 140 million.

LATIN AMERICA.

CHILE.

The Political Situation.

The revolt in Antofagasta in Northern Chile, resulted in the overthrow of General Blanche's military dictatorship in Chile and the establishment of a provisional government of a civilian character.

On 21st October, His Majesty's Government in Great Britain and the Governments of Germany and the United States of America recognized the Chilean Government, recognition having been withheld from the Governments which have held office since President Montero was overthrown by the revolution of June, 1932.

Elections for the Presidency took place on 30th October and Señor Arturo Alessandri, the radical candidate, was elected President.

Señor Alessandri was President of Chile from 1920 to 1925, except for a period of six months from September, 1924, when he was deposed and forced into exile by a military *coup d'état*.

The recurring recent revolutions have made heavy inroads on the Chilean Treasury, so that any Government, civil or military, which takes control of the country is faced with great difficulties, and any permanent stability must depend on an improvement in the economic situation.

YUGO-SLAVIA.

The Gendarmerie.

The Corps of Gendarmerie is organized in ten regiments on a company basis, with a varying number of companies in each regiment. There is no evidence of a battalion organization except at Belgrade and possibly in Macedonia. A Divisional General is in command, with his headquarters at Belgrade. The official establishment for 1932 is 427 officers and 17,950 other ranks, but this establishment can be increased by the transfer of Army personnel in case of emergency.

In peace the gendarmerie is under the orders of the Minister of the Interior as regards the execution of its duties and for purposes of administration. It is, however, governed by the Law for the Organization of the Army and Navy in all matters of organization, armament and discipline. In war gendarmerie units come under the orders of the Divisional General in whose command they are located.

Service in the gendarmerie is voluntary. The officers are either active or reserve army personnel. The other ranks join for at least 3 years and may extend their service up to 10 years. Recruits must be unmarried and under 30 years of age, have completed their military service, be physically fit, of good character and able to read and write.

Armament includes revolvers, bayonets, rifles, machine guns, bombs and swords, and gendarmerie units have their own establishment of motor cars, motor cycles and lorries and also signal equipment. Every regiment possesses its own training school and there is also a central school near Novisad.

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EDITORIAL.

For the last fifteen years the world has been trying to restore itself to pre-war conceptions of life and living. All countries have striven desperately and in most cases vainly to bring back the good old days of prosperity, capitalism and the gradual amelioration of the masses' lot. Unfortunately the war was fought on the empty slogan "to make the world safe for democracy" and now since democracy rules its council chambers, the world seems to be more insecure and less stable in every sphere of human activity than it ever has been. Historians will assert that this is the natural reaction to any great upheaval, but the fact cannot be ignored that the armistice of 1918 ushered in the first flood of democracy at a time most disadvantageous to Demos and his ideals. The fantastic debts incurred by the warring nations were so astronomical in their dimensions to the ordinary layman that he was content to leave their reckoning and disbursement to the experts. The latter were able for a long time to camouflage their bankruptcy in technical colours—tariffs, gold standards, treaties, inflation, deflation and the rest—but the day of complete reckoning had to come.

It has now arrived. England, the world's most honest creditor, has made a token payment of her debt to America because she cannot pay in full. This is the climax to a series of international defaults and is definitely a landmark in world history. Heretofore there was a sort of sanctity to international agreements and the breaking of a treaty was often a *casus belli*. Now, with democracy

as ruler, there is not this spirit of honesty or bellicosity, and it is diverting to note that any unsigned measure of agreement made by European statesmen in their efforts to achieve some stability is dubbed "a gentleman's agreement."

It is the current fashion to disregard all formal agreements. Japan has resigned from the League of Nations because she disagreed with the findings of the impartial Lytton Commission which she helped to appoint; Persia renounced her Oil Treaty and has got away with it handsomely; the Irish Free State recognises herself as an independent Republic despite the shilly-shallying pronouncements in the House of Lords; and Germany will have the Treaty of Versailles torn up within five years. The pen continues to be mightier than the sword.

The League of Nations is popularly blamed for this sorry state of world affairs and its record for the thirteenth year of its existence gives facile scope for its many detractors. On its hands the League has three undeclared wars, in none of which it has been capable of any decisive action: Japan and China; Columbia and Peru; Bolivia and Paraguay. Its major project, the Disarmament Conference, has been a kaleidoscopic shifting of ground and formation so incomprehensible that the world has lost interest and enthusiasm. The United States of America and Soviet Russia, two of the greatest nations, are still non-members.

Democracy demanded "open diplomacy" and it got it in the League. Every nation sent its wind-bag to Geneva to expel platitudes and generalised fatuities. The trained diplomat has been ignored, his knowledge of the country to which he has been accredited has been brushed aside, and in his place some junior member of Government with sufficient press-appeal has been aired to Geneva to hold forth on any subject from World Economics to Traffic in Women in the Congo Hinterland. It is all slightly ridiculous, but it may be thankfully observed that recently the pendulum is swinging back to more business-like and ordered methods. Nations are tending to co-operate on mutual ground and on mutual interests. This may not lead to the goal of Internationalism and a world community of interests so cherished by the doctrinaire of the Cecil and Wells school, but it may lead to a period of peace. And even the League of Nations could not take objection to this.

* * * * *

In these sad times of depression and bankruptcy, when statesmen at the World Economic Conference expatiate on the penury of the Indian peasant (of whom there are about three hundred and twenty millions), it seems ironical and unfortunate that a new constitution is being hammered out in London which will only increase the financial strain on the masses. The proposals for Indian Constitutional Reform as laid down in the White Paper visualise many expensive innovations. In the Centre the Lower Chamber will more than double its membership and the Upper Chamber will quadruple its senators. The allocation of revenue by the Centre is proposed on generous lines. The Centre will return about half of the income-tax it receives at present to Provinces, and half of the export duty on jute which it now takes from Bengal will be assigned to that province. In addition heavy subventions will have to be paid by the Centre to the three new provinces—the N.-W. F. P., Sind, and Orissa. In other words, the more expensive Federation of India will have to exist on less money than it does at present—unless a great trade revival or more stern economies take place.

Despite the small signs of economic recovery to be seen in the improved railway returns and the gradual rise in commodity prices which give grounds for hope, the Finance Member has made it clear that there must be a very large revival of trade before India's exports of commodities (other than gold) are sufficient to balance the volume of imports upon which the Customs revenue of the Centre depends.

In the event of a great trade revival not materialising money will have to be found from either increased taxation or drastic economies, and probably both. Before further taxation is imposed we may expect the usual popular cry "Reduce the Army." The Army Budget, in spite of its phenomenal reduction from 54 to 46·6 crores, is to the uninstructed like a red rag to a bull; and it is certain to be the objective of incessant attacks by politicians. Further military economies may or may not be possible, so it will be interesting to see how this question is affected by the Report of the Expert Committee's Enquiry into the strength and composition of the Army in India, and the Capitation Rates Tribunal Report. These reports appear to take a long time for consideration.

* * * * *

The most interesting development in training carried out this year has been the frontier "flag march" carried out by the 1st Cavalry Brigade and a company of Light Tanks. The main object of the exercise was to experiment with the co-operation of Light Tanks and Cavalry in the different phases of battle under Eastern conditions.

This is the first occasion on which any organised modern mechanised force has been brought into practical co-operation with the Army in India, and the lessons learnt—both from the enthusiastic mistakes and cautious successes in the handling of this sensitive and sensible arm—are numerous. In the first place it is apparent that the Light Tank in India is a delicate instrument, and, for its value to be fully exploited and used with best effect in battle, the Force Commander must employ this arm for some decisive rôle. When we refer to the delicacy of Tanks no disparagement of their mechanical efficiency or the ability of their crew is intended. India, being a non-industrial country, cannot now maintain or equip mechanised units and any serious damage to vehicles will have to be repaired by England; this entails serious delay and points to the necessity of great care and thought on the part of the Force Commander before armoured vehicles are thrown into a battle.

Similarly the conservation of the two-man crew's energy is of paramount importance. When in contact with the enemy the crew have a tremendous task; observation of the ground and enemy; negotiating obstacles, working a machine gun; control of driver or sub-section; maintenance of direction and co-operation with other arms. This is a full-time job when encased in a lurching, roaring shell of steel, and obviously requires consideration before the Light Tanks are employed in a task capable of performance by troops whose physical and mechanical difficulties are not so heavy. It should be remembered, also, that tanks require even more meticulous and detailed grooming after a day's operation than do horses.

These considerations clear the air and help to give us a clue to the most effective employment of Light Tanks in India. And that is offensive. They should not be frittered away in tasks—such as flank guards, reconnaissance, holding of ground pending the arrival of troops, and detachments for subsidiary operations—which can be performed by other troops. The consensus of opinion after their first

experiment in co-operation gives them more responsible rôles. These are briefly as follows :—

In the attack ; as a surprise weapon, concentrated and mobile, to operate on a flank or to overcome the enemy machine guns. In the defence ; again concentrated and ready to co-operate in planned counter-attacks. On the march their economical speed, both for crew and engines, needs careful attention ; being mechanically unsuitable for slow movement—(their average unit road speed is 15 m. p. h.)—in a column of all arms they must move by bounds. Their place, therefore, in a column is dependent on tactical considerations, but in an approach march there seems no reason why they should not accompany the mechanical transport in rear of the column and still arrive at the proper place and time to take an effective part in the battle. This would prevent undue wear and tear on the vehicles and the unnecessary waste of energy of the crews.

At the same time we think it would be wrong at present to stress dogmatism in Light Tank employment in the East ; they are novel weapons the effective employment of which depends on elasticity of temperament and an open mind. The proper utilisation of their mobility, surprise effect and fire power seems to be a more valuable problem for military study than the evanescent concern regarding their maintenance and mechanical fragility. Motor engineering is progressing so fast that one may assume that present imperfections will have disappeared by the time of the next war, and our time consequently might be more valuably devoted to the imaginative belief that our present tanks are perfect, and therefore capable of tasks which we are at present diffident to give them. It is easy to argue that you must employ the tools given you, but every war has produced new tools and, if we anticipate a better tank and train on it, the anticipation will broaden our military imagination and deepen our mechanical foundations. We seem inclined to take our experiments too seriously.

* * * * *

By notification in the *Gazette of India*, No. 565 of 8th October, 1932, the Governor-General in Council formally constituted the Indian Air Force, and appointed the Air Officer Commanding the Royal Air Force in India to command the new force. Six months later, 1st April, 1933, the first unit of the I. A. F. came into being when the first flight of No. 1

Indian Air Force Squadron was formed at Karachi. It is intended to expand this nucleus to a squadron of three flights by gradual stages.

The main difficulty to be surmounted was the question of personnel and this matter has been dealt with successfully and satisfactorily. During 1932 five officers of the General Duties Branch completed their training at Cranwell and one officer trained for the Stores Branch returned from England. In India it was decided that all Indian enrolled personnel serving with the R.A.F. should, for administrative reasons, be brought within the scope of the Indian Air Force Act and should cease to be subject to the Indian Army Act as heretofore. Consequently all the personnel of the Indian Technical and Followers Corps, R. A. F., transferred voluntarily to the Indian Air Force. Thus the Indian Air Force consists of the following personnel in addition to flight cadets under training :—

Officers	..	6
Combatant Ranks	..	144
Non-combatant Ranks	..	332
Followers, Class I	..	271
Total, all ranks		753

The transport link and vital artery which connects India to England is the Suez Canal. Recently there has been some important criticism in imperial and shipping circles regarding the commercial, financial and legal structure of the Suez Canal Company. This deserves our notice, for, disregarding the canal's strategical importance, the questions raised concerning its management affect our pockets in India to a serious extent. The company, officially known as the *Compagnie Universelle du Canal Maritime de Suez*, with its headquarters in Paris, exercises the world's greatest monopoly. The special Canal dues on shipping were reduced in 1931 to six gold francs per ton, gross tonnage, after considerable agitation by the interests concerned, and this is the limit of concession offered. When it is realised that a cargo steamer of 5,540 net tonnage, carrying cargo of 3,872 shipping tons, has to pay Canal dues of £2,181-6-9, it helps one to understand why steamship passages by unsubsidised British liners compare so unfavourably with some continental boats. Taking a

less personal view it is surprising to learn that the average surplus profits on the canal for the four years ending in 1931 were 67·83 *per cent*. On the other hand the average annual receipts of the British Government on their holding of Suez Canal shares in 1926—31 was over one and a half million sterling, about 44 *per cent*. on £3,460,000, the face value of the shares bought in 1875; but this comfortable investment hardly compensates for the damage done to British shipping, and, more important, to British and Indian consumers. French financiers have dominated the policy of the company with an astuteness worthy of their financial recovery after the war, and England seems to be content with her annual *douceur*.

In the statutes of the company it is laid down that the Board of thirty-two members should consist of members "*représentant les principales nationalités intéressées à l'entreprise.*" Actually it consists of a Franco-British *bloc*, (excluding one Netherlands representative), in the proportion of 22 to 10. Taking as a criterion that the interested nationalities are those whose produce and passengers are wholly or mainly sent in either direction through the canal, the following nations would appear to be most interested in the enterprise:—Great Britain, India, the Netherlands, Persia, and the rest nowhere. In 1931 the amount of shipping using the Canal was as follows:—British, 55·46 *per cent*; German, 10·59 *per cent*; Dutch, 8·27 *per cent*; French, 6·60 *per cent*; and Italian, Japanese, Norwegian and American in decreasing percentages.

These are illuminating figures, which become more cogent when compared with the management of the Panama Canal. The Panama cost two and a half times the price of the Suez Canal and the annual upkeep is about the same. Yet the Suez authorities levy dues 44 *per cent*. higher per ton of cargo carried. This powerful monopoly affects India severely and it seems extraordinary that such an unfair commercial handicap should be allowed existence in a world clamouring for fluidity of trade and cheapness of transport. If present canal dues were halved it would give a fillip to British trade, help Indian commodities to gain a western market, and yet give the lucky canal shareholders twice the annual dividend earned by any gilt-edged security.

We have drawn attention to this peculiar state of affairs primarily because its equitable readjustment should reflect advantageously on Indian economics (in which we have all got to be so interested), and secondly because it seems rather ludicrous that the Royal Navy, the British Army and the Royal Air Force protect and keep inviolate the canal which is becoming a barrier rather than a highway to our trade.*

All officers will be glad to see the efforts now being made by Army Headquarters to improve the housing conditions for officers in certain cantonments. Since the war the accommodation in many military stations has been growing steadily worse. In some cases officers have had to live in or share mud-walled, leaking-roofed mausolea on which their landlords expended the minimum of repairs and for which they extracted the maximum of rent. Owing to the increase of officers and the influx into cantonment limits of large numbers of property-owning Indian civilians, there was not sufficient accommodation in many stations and officers were forced to live in expensive hotels and even in tents.

The present situation is really the result of the policy pursued for the last hundred years, by which Government, to save themselves the initial cost of building, gave wide powers to the military authorities to make free grants of the occupancy rights in land in cantonments to persons who were prepared to build for them. The grants were originally made to the officers themselves, but in course of time the bungalows changed hands and by 1929, when the new cantonment legislation was introduced, most of the houses in cantonments were owned by Indian civilians, a fair number were occupied by them and the balance were let to officers at ever-increasing rents. There was some justification for the rise in rents after the war. The houses had changed hands by speculatively-inclined owners, thatched roofs had been replaced by mud ones and there was a sharp rise in material and labour prices during this period. But even allowing for all this the rents charged must have paid over and over again for the few thousand rupees which represented generally the original cost of the bungalows. Even now, when the cost of building and the value of houses have dropped by nearly 40 per cent. all over India, there are cases of rents having increased in the last eight years by 100 per cent.

* The interested reader might study the article, "The Suez Canal," by Sir Arnold Wilson in "The Nineteenth Century," June, 1933.

If Government had only pursued from the beginning a policy of building for themselves or at least charging proper rents for land leased for that purpose, the military estate in cantonments would now be worth crores of rupees. As it is, the evil has grown to such large proportions that no simple remedy is possible. The present policy of resuming a limited number of sites in selected cantonments, complicated though it may be by legal and administrative considerations, is a step in the right direction. It is hoped that the transfer from private to military ownership will be carried out with the least possible friction.

One of the commonest gibes at *p.s.c.*-officers is that once they **Staff Officers and Regimental Duty.** have graduated at a Staff College the remainder of their service is spent away as much as possible from their units. We do not believe this to be true. We can sympathise with the natural inclination of a trained staff officer to seek employment where his talents and ambition might have more scope, but there are regulations on the subject whereby it is ensured that *p.s.c.* officers alternate their periods of staff employment with spells of regimental duty. The latter periods, due to the annual increase in graduates, tend to grow longer.

This gibe is so hoary that it would not deserve attention, except that, by its frequent repetition, its influence has now invaded circles which appear to accept it as truth. In the discussion following a lecture on "The Training of the Army for War" at the Royal United Service Institution an officer stated: "I think it is no exaggeration to say that, after an officer leaves the Staff College, if he returns to his regiment for a year or eighteen months in the next ten years, that is the most that happens; frequently it is less."* In an article ("Training and Employment of Regimental Officers") in the same Number the author writes: "..... when a good regimental officer becomes a Staff College graduate and does well in his first staff appointment, except for two or three visits of six to nine months' duration—spread over the next ten or fifteen years—his services are virtually lost to his regiment until he becomes a second-in-command or a commanding officer."

These assertions are somewhat surprising, and, while we do not know if they correctly describe *p.s.c.* employment in England, we

* R.U.S.I. Journal, May, 1933.

are sure that they are not accurate concerning the Army in India. An examination of the employment of a batch of officers who left the Staff College over ten years ago—and this during a time when there was a shortage of *p.s.c.* officers—proves that the average period of regimental duty performed by these officers was over four years. One officer, it is true, spent only one-and-a-half years with his unit, but seven spent six years, four spent five, and seven others spent over four. These figures speak for themselves.

Furthermore, it is not generally realised that the majority of *p.s.c.* officers get only one four years' staff appointment between leaving the Staff College and becoming second-in-command. The average leaving age is 35, and when four years' employment, at least one year's regimental duty and leave are added, the officer has completed 19—22 years' service, which brings him into the zone of seconds-in-command. Thereafter he is not eligible for staff employ until he gets command, and his staff training is at the disposal of his unit.

We hold no brief for *p.s.c.* officers, and we are in cordial agreement with the desire that their abilities and knowledge should be utilised more than at present in their own units; but loose statements of the kind quoted above are liable to do more harm than good.

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MILITARY INTELLIGENCE IN TRIBAL WARFARE ON THE NORTH-WEST FRONTIER OF INDIA.

BY CAPTAIN H. L. DAVIES, M. C.

General Considerations.

Although the general principles which govern the activities of the Intelligence Branch in normal warfare against an organised enemy will hold good in tribal warfare, there are certain considerations that affect the application of these principles in campaigns across the North-West Frontier.

These considerations, summarised, are :—

- (a) The existing organization of the covering force Districts.
- (b) The necessity for employing small columns, somewhat isolated from their higher formations.
- (c) The dependence of such columns upon local intelligence sources.
- (d) The nature of the country, and the tactics and psychology of the enemy.

The above points are discussed briefly below.

To maintain the tranquillity of the tribes, "Covering Force" Districts have been formed, *viz.*, Peshawar, Kohat, Waziristan and the Zhob Independent Brigade.

The Brigades within these Districts are situated, either, just behind the border, as in Peshawar and Kohat, or actually in the midst of tribal territory, as in Waziristan.

Operations in tribal country carried out by the Covering Troops may vary from a steady advance, the rapidity of which is controlled by the formation of an organized L. of C. (and possibly the building of an M. T. road) behind the striking force, to mobile operations, on a light scale of kit, carried out by a column based on a fortified camp inside tribal territory.

An example of the first situation was the Waziristan campaign of 1919-20, and of the second situation Waziristan operations in 1930.

In either case it is unlikely that the actual striking force will exceed a Brigade with attached troops, though, if an organized

L. of C. is being established, reserve Brigades may be distributed in depth on this L. of C. Such operations may become necessary in the Tirah or in Mohmand, but in Waziristan, where the control of the country is based on three fortified camps with mobile columns operating from them, the first situation, referred to above, will be almost inevitable.

It follows, therefore, that as the striking force will be normally limited to a Brigade, and that as the collection of information regarding the enemy and the country generally, will be primarily the task of the striking force, the responsibilities of the Brigade Intelligence staff are considerably enhanced in tribal warfare.

The enemy is not organized, that is to say he concentrates suddenly for specific operations and disperses with equal rapidity. Reconnaissance with ground troops is, therefore, of little value, particularly as the country discounts to a large extent the use of cavalry and armoured fighting vehicles. Consequently, until battle is actually joined with an enemy concentration, the striking force must depend for its information regarding the movements and intentions of the tribesmen upon political information, or news obtained from local friendlies and agents.

On the other hand there are few areas in tribal country that have not at one time been the scene of previous campaigns, and the tactics of the enemy are marked by an incorrigible conservatism. They will concentrate for serious opposition at certain definite positions and they will probably occupy these positions in exactly the same way as they did in previous campaigns in that area. For example, in Waziristan the Ahnai Tangi and Barari Tangi, have been the scenes of numerous actions during the campaigns of the past hundred years in that country, while the Mahsud tactics, and the positions they occupied, during the destruction of Makin in 1920 and in 1923 were practically identical.

Consequently, the information obtained by political sources can frequently be reinforced by intelligent forecasting based on a knowledge of previous campaigns. From the above considerations certain deductions can be made:—

- (a) The Intelligence Staff, and particularly the Brigade Intelligence Officer, are of very enhanced importance in tribal warfare. The Brigade Intelligence Officer must be prepared to deal, not only with battle intelligence when contact

with the enemy has been gained, but with political intelligence, and local agents and friendlies, during the advance.

- (b) To assist the Brigade Intelligence Officer in the above duties the attachment of a political advisor to Striking Force (Brigade) Headquarters becomes essential.
- (c) The fullest possible information regarding the country, the inhabitants, the political situation, and previous campaigns in the area concerned, must be placed at the disposal of the Brigade Intelligence Officer before the advance begins and throughout the course of the operations.

Preliminary Arrangements for a column about to operate in Tribal Territory.

In the following paragraphs it is assumed that a Striking Force of one Brigade with attached troops (hereafter referred to as S. F.) is about to advance into tribal territory, forming an organized L. of C. behind it, the Headquarters of the Covering Force District concerned remaining in its peace station.

Bearing in mind the deductions arrived at in the preceding paragraph, certain preliminary arrangements are necessary before the advance begins.

(a) *Distribution of available information.*

At Peshawar exists the Military Intelligence Officer, whose task throughout the year is the collection of information relating to all parts of the North-West Frontier from Chitral to Waziristan. A similar office for the Zhob and Baluchistan exists in Quetta.

The first step, therefore, is to obtain from Peshawar (or Quetta according to the area of operations) the fullest information available regarding the topography, resources, political situation, possible friendly maliks, etc. The compilation of a tribal directory, which includes indexed air photographs of practically all the important valleys and village areas of the North-West Frontier has been proceeding for the past two years. With the completion of the Waziristan directory, now in hand, the whole of the North-West Frontier will be dealt with. These directories will be of enormous assistance in future operations across the border.

The above information will be reinforced by the relevant route books, hand books, and maps which already exist.

(b) *Provision of a qualified Brigade Intelligence Officer.*

Brigade Intelligence Officer is a permanent peace appointment in all Brigades. To deal adequately with the responsibility of his appointment in tribal warfare, a Brigade Intelligence Officer must possess the following qualifications :—

- (i) Be trained in his task.
- (ii) Be able to speak Pushtu and Urdu.
- (iii) Have a good knowledge of the Frontier and of the tactics and psychology of the tribes. In addition, of course, he must have the confidence of his Brigadier.

Prior to the advance he must obtain and read the official accounts of previous campaigns in the area of operations.

(c) *Provision of a Political Advisor.*

The necessary arrangements must be made to obtain a political officer to accompany the column. The selection of this advisor will rest with the political authorities, who may appoint either an officer or a tehsildar, according to the importance of the operations. It is important to remember, however, that the individual selected will join the S. F. staff in the capacity of an advisor and not as an executive Intelligence Officer. All intelligence duties must remain under the control of the General Staff, represented in this case by the Brigade Intelligence Officer.

(d) *Co-operation with the R. A. F.*

In addition to the above arrangements, full consideration must be given to the assistance that can be obtained from the R. A. F. It is probable that the control of aircraft co-operating with the column will be retained by the District Headquarters concerned, who will decide whether it is necessary to embody an Intelligence Liaison Section to work with the co-operating squadrons, and the tasks required. The S. F. Headquarters, however, will be responsible for indicating any particular area of which photographs are required, and for demanding air reconnaissance to confirm reports received from ground sources, or to reinforce the knowledge already available regarding routes, camping grounds, water-supplies, and possible enemy positions, etc.

In important operations a R. A. F. Liaison Officer may accompany S. F. Headquarters in an advisory capacity. Normally, however, shortage of officers will render this difficult.

The Advance into Enemy Country.

During the preliminary advance the S. F. intelligence staff will be occupied principally in the collection of information relating to the intentions of the tribesmen in its immediate vicinity ; also, in the collection of topographical information relating to the country through which it is advancing for addition to, or in amendment of, the relative route books, handbooks and maps.

District Headquarters, in close touch with the Military Intelligence Office, (Peshawar or Quetta) and the Political Authorities, will be watching the repercussions of the operations on neighbouring tribes, and the possibility of their joining in the struggle, either by direct reinforcement, or independent operations in their own areas. This information will, of course, be passed on to the S. F. intelligence staff.

The sources of information at the disposal of the S. F. intelligence staff will be :—

- (a) Local agents and friendlies through the medium of the attached political advisor.
- (b) Any special reconnaissances ordered by the S. F. commander.
(*Note.*—Reconnaissance carried out at any distance must be a reconnaissance in force for which the whole Brigade may be required. Individual reconnaissance, or even the employment of patrols, will seldom be possible in tribal warfare).
- (c) District Headquarters who will forward :—
 - (i) information received through the Military Intelligence Office or Political sources.
 - (ii) information obtained by air reconnaissance.
- (d) L. of C. detachments.

Throughout the operations the responsibility of detachments in regard to local intelligence must be borne in mind. The enemy have no definite "front." They may concentrate in areas on either flank of the L. of C. with the intention of attacking posts on the latter. Consequently, all such posts must provide their own local intelligence arrangements which will include observation of the surrounding country from permanent piquet posts positions, and interrogation of local contractors or friendlies.

Generally speaking the main source of information during the preliminary advance, and before contact has actually been established

with enemy concentrations, will be agents, political and R. A. F. Very little information can be expected from the fighting troops and their "battle intelligence" organizations.

INTELLIGENCE DURING THE BATTLE.

(a) *Factors influencing battle intelligence in tribal warfare.*

These factors are :—

- (i) The imposition upon our own troops of an "all round" front.
- (ii) The number of small detachments in piquet positions necessitated by this "all round" front.
- (iii) The tactics of the enemy, who seldom exposes his intentions until some error on the part of our own troops gives him an opportunity to operate in circumstances favourable to himself. Each of these factors deserves special consideration.

(b) *The "all round" front.*

In normal warfare a Battalion will seldom be deployed upon a front exceeding 1,000 yards. Normally, at least one flank of a Battalion acting in a Brigade operation will be covered by another deployed Battalion. Consequently, the front that must remain under the observation of the Battalion intelligence section will not usually exceed 1,500 yards of moderately level ground. In tribal warfare on the North-West Frontier, a Brigade will usually move up a river bed enclosed by hills. This applied equally to areas such as Waziristan where circular roads have been constructed, for it is unlikely that the tribesmen will select country traversed by these roads for their operations.

With the Brigade moving by a narrow valley, therefore, it will seldom be possible to deploy more than one Battalion during the advance, and this Battalion must protect its flanks by means of piquets. This piquetting is normal in all movements on the North-West Frontier, so a battalion when deployed, during either an advance or a withdrawal, will find itself spread in detachments over an area up to 1,500 yards in depth. That is to say, it will have a front of at least 3,000 yards to watch. There are occasions of course, when a Battalion may be called upon to attack a definite feature on a limited front, with its flanks protected by other portions of the Brigade, but normally,

as all movements in tribal territory is limited by the nature of the country to the river beds, these extended "fronts" will be necessary.

A Battalion intelligence section of six men, or three observation groups, cannot be expected to maintain continuous observation over 3,000 yards of mountainous country. Nor is it necessary; for the piquet positions are sited to afford good observation, and are primarily responsible for watching their areas and the enemy movements therein.

But if the observation groups of the intelligence section are not to observe the enemy what are they going to do? Before discussing this it is necessary to turn to the second factor mentioned above namely:

(c) *Isolated detachments necessitated by the "all round" front.*

As mentioned above a Battalion deployed will normally have to cover a depth of 1,500 yards with two fronts, one to the left and one to the right, making a total frontage of 3,000 yards. The piquets placed to protect this "all round" front will be sited on features offering good observation, and far enough off the line of advance to protect the moving column from small arms fire. Such piquets will seldom be more than 500 yards apart, and of not less than a platoon in strength. Consequently, a fully deployed Battalion may have at least six detachments in its area. Probably it will have more.

Observation of all these detachments from Battalion Headquarters will seldom be possible. Yet direct observation from Battalion Headquarters is most advantageous in view of the mobility of the enemy and the consequent importance of the time factor.

Consequently, it is suggested that the most important role for the observation groups of the Battalion Intelligence Section will be the maintenance of continuous observation over its detachments from the vicinity of Battalion Headquarters. In this respect the third factor mentioned above must also be considered. This factor is,

(d) *The tactics of the enemy.*

The tribesman will seldom commit himself to any operation until he has had an opportunity for studying the dispositions of his adversary. This is the reason why an advance is seldom disputed with vigour, whereas a withdrawal is ferociously harassed. A dangerous period also is the interim, when piquets have been posted and are waiting in position until the operations in train have been concluded,

and their withdrawal is ordered. Having selected as their objective a piquet which is badly sited, or at some other disadvantage, the tribesmen will concentrate with their usual mobility and deliver a sudden attack, worked out, generally, with considerable tactical skill. An attack of this nature is often prepared by an increase of sniping in that particular area in order to cover the approach of the main attacking party. Similarly just prior to the withdrawal, the volume of sniping (and also the volume of the fire from the piquets themselves) will often serve as a guide to the areas from which most danger may be anticipated. Intelligent observation of these indications, and their transfer to Battalion Headquarters by the Intelligence Section observation groups will assist the Battalion Commander in siting his reserves and making his dispositions generally. Any information also sent in by these groups indicating errors in the positions of piquets, or the appearance of enemy in the immediate vicinity of piquets, will forewarn Battalion Headquarters of projected attacks.

Hence the study of enemy tactics and the deductions to be made from certain specific indications must be part of the education of Intelligence Section personnel.

(e) Role of the Battalion Intelligence Sections.

From the above considerations, therefore, the role of the Battalion Intelligence Sections in tribal warfare may be summarised as follows :—

- (i) To maintain a continuous observation over the Battalion area with particular regard to isolated detachments such as piquets.
- (ii) To report to Battalion Headquarters all piquet activities indicating particularly, volume of fire directed against any such piquets, signs of enemy activity indicated by fire opened from piquets, enemy attacks against piquets, and the progress of any reinforcements moving up from company reserves.
- (iii) To watch for and report any piquet occupying a badly sited, or otherwise disadvantageous position.

In order to carry out the above role successfully, Intelligence Section observation groups must be given definite zones containing specific piquets to observe. Their position must enable them to watch their zone adequately and must be within runner distance of Battalion

Headquarters. During movement these observation groups must move by bounds so that there is never less than one group in observation.

At Battalion Headquarters the Battalion Intelligence Officer, assisted by his N. C. O., will be responsible for formulating his observation group plans during rest and movement, issuing the necessary instructions to his groups to bring these plans into effect, maintaining the Battalion situation map, collecting and reporting the information received from all sources according to the instructions contained in the Manual of Military Intelligence.

(f) The role of the Brigade Intelligence Section.

It has long been a moot point whether the results they can achieve justifies the retention of the personnel of the Brigade Intelligence Section, (other than the Brigade Intelligence Officer and the N. C. O.) in tribal warfare.

It is argued that the redistribution of the six (or eight) men of the Brigade Section amongst the Battalion Sections would increase the efficiency of the latter by giving them an extra observation group each, and that such observation as is carried out by a Brigade Section is of little value to the Brigade Commander who will be in close touch with the situation.

To arrive at any conclusion in this controversy it is necessary to consider whether the Brigade Commander is invariably in such close touch with the situation of his Battalions that independent and continuous observation by Brigade Section Groups will remain unnecessary.

During movement, either forward or backward, it will be quite common to find three Battalions of a Brigade deployed along the route. This may mean that these Battalions are extended over a depth of some three miles of mountainous country.

It is true that the Brigade Commander himself will be in close touch with the leading Battalion Headquarters in an advance, or with the rear Headquarters in a withdrawal, and that these battalions are the ones most likely to be engaged by the enemy in the various circumstances. But the enemy is not invariably going to confine his attention to the Battalions actually engaged in movement, but will often select a stationary road piquet for the scene of his operations.

Hence at any point along these three miles, situations may arise with which the Brigade Commander is not in touch.

It is equally common to find a Battalion detached from the Brigade holding an important feature at some distance from the axis of operations, with the remainder of the Brigade employed in piqueting the route and carrying out operations against the enemy in some other area. Such a situation is illustrated in the attached diagram which shows the dispositions of the 9th Ladha Brigade during the burning of Makin in 1923.

During the period occupied by the preparation for destruction of BASAM village both 'A' and 'B' Battalions were being heavily engaged, and, in addition, enemy at point 'X' were sniping the destruction parties and threatening an attack against the protective detachments at point 'Y'.

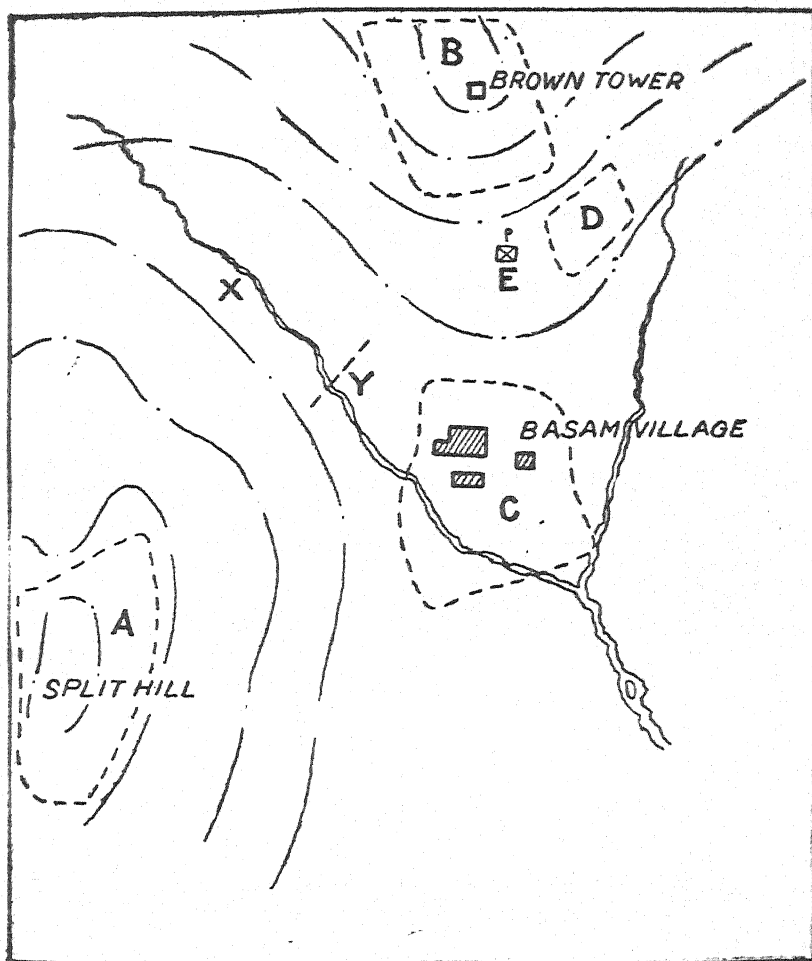
In these circumstances it is evidently impossible for the Brigade Commander to observe personally, with any degree of continuity, the events in each of the engaged Battalion's areas. The wide dispersion of the Battalions made it impossible to maintain any personal touch with the Battalion Headquarters of 'A' and 'C' detachments, consequently observation of the events in these areas was even more necessary than usual. It is not considered that the particular deployment illustrated in the diagram is in any way an uncommon one in tribal warfare. In fact such dispersion will be normal. Nor is it unusual for more than one of the detached Battalions to be engaged at the same time. Consequently, it is considered that on all occasions when the Brigade is deployed in action against tribesmen, independent observation by Brigade Intelligence Group will be most advantageous.

During movement there must be periods during which Brigade Headquarters are "bounding" from one position to another. Consequently, if the Brigade Commander is relying upon his personal observation to keep in touch with the situation in his Battalion areas, there will be moments when he is completely out of touch. With Brigade Observation Groups in position and bounding similarly in accordance with a pre-arranged plan, this hiatus would not occur.

Consequently, it would appear that a specific use can be found for the Brigade Intelligence Section both during movement and during stationary operations.

In addition to this, if provided with ponies or saddle mules, liaison groups of the Brigade Intelligence Section can keep in touch

**ROUGH SKETCH SHOWING DISPOSITIONS DURING DESTRUCTION
OF BASAM VILLAGE.**



with Battalion Headquarters, using the covered route protected by piquets for their movements. It is suggested, therefore that the role of the Brigade Intelligence Section will be :—

- (i) Observation of Battalion areas from the vicinity of Brigade Headquarters when Battalions are dispersed over a wide area.
- (ii) Movement by bounds from observation position to position during movement, with one group invariably in observation.
- (iii) Liaison with Brigade Headquarters by means of liaison groups mounted on ponies or saddle mules where a covered route between the Battalion and Brigade Headquarters exists.

At Brigade Headquarters the Brigade Intelligence Officer will carry out his duties of maintaining the situation map, and collating and distributing information received, in accordance with the instructions laid down in the Manual of Military Intelligence. He will be responsible also for issuing the necessary orders to his section to enable them to carry out their role.

(g) *The R. A. F. and "battle intelligence."*

During actual contact with the enemy one or more close reconnaissance machines will normally be co-operating with the Striking Force. In view of the scarcity of R. T. tenders in India, and also the difficulty of moving any form of wheeled vehicle over the country without metalled roads, it is probable that communication between the air and ground will be confined to light signals, dropping messages and ground strips.

From an intelligence point of view this represents a great disadvantage because specific instructions for reconnaissance cannot be given to the air. Despite this disadvantage the close reconnaissance machines can be of great assistance to the Intelligence Staff. By means of pre-arranged light signals fired over the vicinity of enemy concentrations they can impart considerable information regarding the movements, dispositions, and numbers of tribesmen engaged out of sight of the piquet positions. Also the reports of relieved pilots, given to the Intelligence Liaison Section at the aerodrome on return from a reconnaissance over the area of operations, can be relayed by W/T to the Striking Force Headquarters. To benefit to the full from the signals given by the close reconnaissance machine it will be necessary to keep it under constant observation. A group from the Brigade Intelligence Section will probably be the best means of maintaining this constant observation.

It is evident that a R/T tender with the Striking Force Headquarters would be most advantageous. Consequently, if the road communications admit of it, and if the tender is available, one should accompany the Striking Force.

Duties of the S. F. Intelligence Staff at the conclusion of operations.

Any operations undertaken in imperfectly surveyed territory will give considerable opportunities for increasing the existing information regarding communications, local resources, sizes and positions of villages, water supplies, camp sites, etc. Consequently, at the conclusion of operations the Intelligence Staff must prepare a report summarising the information gained under the above heads, and illustrated, where possible, by marked maps or enlargements. This report will be submitted by the normal channels to Army Headquarters for the amendment, or addition to, route books and maps.

It is a curious fact that despite quite a number of minor frontier campaigns carried out since the formation of battle intelligence sections, no report has been produced dealing, from a practical point of view, with their employment in this type of fighting. Consequently the training and employment of these Sections is largely influenced by experience gained during peace training. It is considered, therefore, that the Striking Force Intelligence Staff should draw up a brief report, on the conclusion of operations, embodying remarks on the working of the Brigade and Battalion Sections, with suggestions for improving their efficiency, either by additional equipment, or by new methods of employment.

Such reports would be a source of considerable assistance to the instructing staff at Command intelligence courses where the Brigade and Battalion Intelligence Officers of the future are trained.

Conclusion.

Space has precluded the discussion of this subject in any great detail. The object of the paper, however, has been to indicate the very considerable differences that exist between military intelligence in normal warfare, (which is exhaustively dealt with in the Manual of Military Intelligence) and military intelligence in tribal warfare, (which is dismissed in the manual in the space of fourteen pages dealing entirely with principles). As it is the lot of the Army in India to deal extensively in tribal warfare, and not at all in normal warfare, the above would appear to be a situation in need of amendment,

MODERN COUNTER-BATTERY.

By BR. LT.-COL. R. G. CHERRY, M.C., R.A.

Though counter-battery work is, primarily, the responsibility of the artillery, yet it should interest all arms. For, if the enemy has any artillery worthy of the name, that artillery will cause casualties to our troops, and will imperil the success of our operations in a greater or less degree according to the adequacy of the steps taken against it. It is proposed to consider and explain, briefly and not too technically, the theories that are now held on this subject of counter-battery. They are based largely on experience gained in the last war; yet the world has not stood still, conditions have altered, there is a great tendency to speed up in all professions, including that of arms. Obviously, therefore, much of that which is advocated has not yet been put into practice against a live enemy. It is not, therefore, easy to form an accurate idea of the effect of C. B. fire, as advocated to-day. However, if the theories are based on sound premises, one may be allowed to hope that they will prove efficacious in practice.

Let us consider the question from first principles:—(a) the object, (b) the weapons, (c) the organisation to produce that object with those weapons. Now, the main object of counter-battery work, as in all other artillery work, is to put down the requisite number of shell in the right place at the right time. If this sentence is analysed in detail, we shall very soon get a good grasp of the first principles of counter-battery work. Gunnery should always be considered in terms of Shell, and the size and nature of those shell will vary according to the task to be performed.

In counter-battery work, the task is neutralisation or destruction of hostile batteries. Generally speaking, neutralisation only need be considered in mobile warfare, as ammunition will seldom be available to allow a policy of deliberate destruction of enemy ordnance. Practical experience in the last war shewed us that the best way to neutralise a battery is to subject it to an intensive bombardment of high explosive shell of as large a calibre as possible.

This is all very well for position warfare, when unlimited ammunition and a considerable amount of heavy artillery is available, but it cannot be done in mobile warfare,

However a short, intensive, bombardment should, if accurate, suffice to disorganise the battery and prevent it from functioning for a period of time, and if this bombardment were repeated, then the period of disorganisation would be lengthened in proportion. As far as ammunition is concerned, modern research has provided us with powerful H. E. shell and an effective instantaneous fuze, so that the shattering effect of even a short bombardment would, we think, be considerable.

The policy as regards method may be illustrated by the following short example :—

About 150 shell are available to neutralise a hostile battery for about $\frac{3}{4}$ hour. They would be fired, more or less according to the following idea :—

5 minutes concentration	..	.. 60 rounds.
10 minutes off	..	.. nil.
4 minutes concentration	..	.. 40 rounds.
12 minutes off	..	.. nil.
4 minutes concentration	..	.. 40 rounds.
10 minutes off	..	.. nil.

The best weapon in the field army for this work is the Medium Howitzer, which fires a 100 lb. shell. According to the book, its maximum rate of fire is two rounds per gun per minute, but, by means of a simple quick-loading device, this rate has recently been increased to four. Any gun or howitzer may, however, be used for this work, the latter being preferable owing to their heavier shell. In order that this fire may be effective, a considerable proportion of the shell must fall on or near the target. As the effect of H. E. is mainly lateral, a battery that is not dug in is very vulnerable to H. E. that burst in or near the line of guns.

The likelihood that a large proportion of shell fired at a battery will fall in this area depends on a number of factors. The most favourable conditions exist when the fire of the battery can be controlled or corrected from a ground or air O. P. The occasions in war when a hostile battery can be seen from a ground O. P. should be rare.

Balloons are at the moment rather under a cloud—in fact it may be said (by those who like to mix their metaphors) that they fall between the Scylla of the Air Force, who see in them a home for tired

pilots, and the Charybdis of the army, who would be glad to take them over were it not for the expense involved. There remains the Arty/R. pilot, who can correct fire on to targets if he has the opportunity to do so. He is, however, a very overworked person and experience tends to indicate that he will seldom have the time to direct our fire on to more than three or four hostile batteries per hour, and a divisional commander will be lucky if he gets one Arty/R. machine up on his front continuously throughout a day's operations.

If the fire cannot be corrected, it must be predicted, and predicted fire is always more or less a gamble. The accuracy of predicted fire depends on the accuracy with which it has been possible to fix the guns, and the target, to get up-to-date meteorological corrections, and to calibrate the guns. Under conditions of mobile warfare it is not always possible to attain great accuracy in the above factors, consequently the effectiveness of a bombardment of hostile batteries carried out predicted cannot be guaranteed.

Given sufficient numbers of the right type of shell, and a reasonable chance of ensuring that a sufficient proportion of them will fall in the close vicinity of the target, it remains to ensure the timely arrival of those shells. This is, in all phases of a battle, a matter of organisation.

The problem of organising counter-battery work in the various phases of mobile operations has been receiving a good deal of attention lately and some interesting tactical exercises have been carried out at home to study this aspect of the fire plan.

But before considering these problems it is just as well to have some picture of how counter-battery work functions when time is available, *i.e.*, during a temporary static period. Effective counter-battery work depends on good organisation, accurate information and adequate communications. Whenever possible, this work is controlled on a corps basis, and a special counter-battery staff is allowed as part of the staff of the C. C. M. A. of corps. This staff consists of C. B. O., assisted by a Staff Captain (O) and a Staff Captain (I). Their job, in general terms, is to discover the enemy artillery dispositions and to take action generally in accordance with the C. B. policy laid down and particularly as part of the fire plan for an operation. They have various sources of information, aeroplanes, balloons, flash spotters, sound rangars, air photographs, etc., and given time

they should be able to obtain and keep up to date a fairly complete knowledge of hostile battery positions.

In order that information may reach the C. B. staff quickly and that they may be able to apply fire when and where required at short notice, adequate communications are essential. In fact the question of whether corps can control C. B. work or not depends primarily on communications.

Let us consider for a moment the situation during a temporary static period. We may picture the C. B. staff in possession of more or less complete information, having a certain number of batteries allotted to this work, enough A./R. aeroplanes and adequate communications. We may also assume that at this stage survey is complete, giving the C. B. staff the power to concentrate at will.

How do they set about their task?

There are two situations to be considered.—

(a) a static period which may be purely defensive or preparatory for an attack.

(b) the attack itself.

During a defensive or preparatory period, counter-battery work will depend on the policy laid down by Army or Corps H. Q.

This policy may be aggressive or the reverse. It may aim at constantly engaging hostile batteries and keeping them on the move, or it may aim at keeping them where they are and concentrating on getting accurate locations by every means other than shooting. In either case the work of the counter-battery staff is more or less a matter of routine, making out daily programmes of tasks, dealing with demands for neutralizations and recording information for use later on.

In the attack itself the important point to realize is that counter-battery work forms part of the fire plan just as much as the detailed arrangements for direct support by barrages or concentrations. It is, in fact, one form of covering fire. If full value is to be got out of it, the counter-battery plan must be carefully thought out and co-ordinated with the rest of the fire plan. In other words, the plan of attack must be studied with the map and the dispositions of the hostile artillery in order to decide which are the phases or periods during which hostile artillery fire may constitute the chief obstacle to the success of the attack and to ensure that an adequate number of guns is allotted to C. B. work during those periods.

It will not usually be possible or necessary to make a fixed allotment for the whole of an operation, since the requirements will vary, so that the relative importance of covering fire and counter-battery tasks must be considered phase by phase.

As an example of what is meant, take the case where tanks are to be used in the second phase of an attack after the first objective has been gained. In this phase the hostile field guns will be of particular importance as an obstacle to the tanks progress and C. B. attention should be specially concentrated on them. Support of our tanks may be given in the form of a timed concentration on these enemy field batteries or perhaps by a smoke barrage put down by our own field guns. Having decided on the periods during which counter-battery is of special importance, an adequate allotment of artillery for this task must be arranged and there then remain to be settled the details of the counter-battery fire plan.

This plan has to take into account two categories of hostile batteries, those whose positions are known sufficiently accurately for them to be engaged by predicted shooting, and those whose positions are suspected or quite unknown. The latter can, of course, only be dealt with by air observation after zero hour and when there are many of them, they constitute a very difficult problem. At the moment we are considering the attack after a static period when the number of unknown positions should be small and the number of known positions correspondingly large.

The normal method of dealing with these known positions is by a pre-arranged neutralization programme, consisting of a series of timed concentrations on groups of targets selected for their probable importance at those times. If our ideas on neutralization are right, it should be possible to engage them in groups in succession provided that no battery is given time to recover completely from one crash before the next arrives. This means, in practice, that not more than two or possible three successive groups can be dealt with during one phase and, even so, the crashes must be short and therefore at a high rate of fire. Each crash should be, if possible, a concentration of 2 to 1 and it will, therefore, often not be possible to engage all the known batteries which are potentially important. In this case a further selection will have to be made of the most important targets based on a knowledge of their positions and their normal zones.

Finally, in making out this neutralization programme, the probable rate of advance of the attack must be kept in mind to ensure that fire is lifted off the most forward enemy batteries in time.

There is one other point about these pre-arranged neutralisations. They are based on information up to the latest possible time, but as orders take time to produce and distribute, that time is, probably, about six o'clock the previous evening. Last minute moves of known batteries must always be anticipated, and it is, therefore, wise to tell the first A/R pilots, as their priority task, to send N. S. calls on batteries in the programme which have moved. This saves wasting ammunition on empty positions and also gives the C. B. staff guns in hand to deal with newly located batteries.

With all these factors to be considered, as well as the complications of ranges and arcs of fire of the various batteries allotted to C. B. work, it is almost always necessary for neutralisation programmes to be made out in complete detail by the C. B. Staff. In this they differ from other task tables where brigades are given tasks which they in turn allot among their batteries.

This is a very brief description of how C. B. is worked when time and information are available, and of how a C. B. fire plan is made. In England this organisation actually exists; officers are earmarked and take part in schemes as members of the C. B. staff.

It has been anticipated, and in fact it is obvious, that the necessity for some form of C. B. work will arise in operations that take place under divisional or brigade control, in fact whenever hostile artillery imperils the success of any operation. Accordingly, the C. B. staff captains are lent to C. R. A.'s of divisions to act as their C. B. advisors. At the earliest possible moment this C. B. S. O. should establish liaison with the A. C. squadron through the Squadron Artillery Officer, with artillery brigade commanders, and with the commander of any Medium artillery that may be attached to division. In conjunction with Div. "I" and the staff Lieut. R. A. he should help to organise artillery intelligence, making C. B. his own special concern.

In the early stages of operations, C. B. work will not be very complicated. The C. R. A. will have to ensure that a fair proportion of sorties, according to the tactical situation, are allotted to Arty/R. duties. He must arrange for batteries to be ready to answer calls

for fire on hostile batteries according to the general policy laid down, and for concentrations of fire to be put down, if and when required on batteries previously registered. These are, more or less, matters of routine and there are no special difficulties involved. Later on, when, for example, it is found that an attack on a comparatively large scale has to be launched, the problem is not so easy.

Infantry Brigade Commanders are always inclined to ask for all the available artillery to give covering fire for such an attack, in the form of either barrage or concentrations. They do not always realise that hostile batteries must often, if not always, be included among the targets for such covering fire. In fact every located hostile battery that might interfere with an attack should be included in the fire plan. In addition, provision must be made for engaging previously unlocated batteries as soon as they are observed from ground or air O. Ps. The chances of being able to bring concentrations of fire on any or all such batteries depends on the survey situation, and on the number of guns available for this work. It will usually be found that the number is quite inadequate to deal with all located hostile batteries at once. Often a selection will have to be made, and those noted as being specially dangerous from their position and previous activities will take precedence.

It will be recognised that the presence of this technical expert at Divisional H. Q. will ensure that C. B. work receives full consideration. Moreover, when the time comes for Corps to resume control of operations, including C. B., it will be found that much useful information has been collected, and much good liaison established. The C. B. O. will be able to start work with his two assistants completely in the picture.

How can officers of other arms help in making C. B. work effective? Much can be done by unit intelligence officers, who should make sure that all information, such as Shelling Reports, is sent through. Such reports should give as much detail as possible; the direction from which the enemy shelling is coming, a "scrape" of the shell, the time, intensity, and damage done. All this information may be, and often is, invaluable to those who are building up the C. B. picture.

Formation commanders and their staff officers can help by appreciating the importance of dealing with enemy guns, and not, therefore, diverting too much of the artillery to other purposes. In peace training there will always be a tendency to underrate the power of the

artillery. This is due to the fact that little is seen of the guns and less is heard of them. At practice camps spectators are seldom given the opportunity of seeing the effect of "fire for effect." This will be very quickly corrected in war, but it is better to start off with a true conception and conduct peace training accordingly.

It is suggested that umpires at manoeuvres, and directors at T. E. W. T. S. should always paint the C. B. picture, and be prepared to discuss the action taken by those to whom the picture is painted. For example, a battalion commander is told by an umpire that this attack is being held up by artillery fire coming from a certain direction. He should appeal at once to the commander of the artillery supporting him. The latter may, and probably can do nothing with his own guns to neutralise this fire, but he can and should report at once. There may be a medium battery linked to his grid doing C. B. work with air observation and the offender may have been registered. In this case the answer is obvious. He may, however, have to report to the C. R. A. who should then take steps to have the offender neutralised.

It is suggested that whenever A. C. aeroplanes are available on manoeuvres, a definite programme of C. B. work should always be included among their tasks, and artillery umpires carefully instructed to devote attention to this work. There is a tendency to-day to think that C. B. work is the sole province of the Medium Artillery, or that it is never decentralised below divisions.

It has been suggested that light field batteries acting in support of an attack can do no more than attempt to blind enemy O. Ps. with dust or smoke. But it should be remembered that an intelligent artillery commander spreads his O. Ps. over a wide area, and if only one O. P. is left unblinded, the officer installed therein can often control the fire of an artillery brigade.

Whereas batteries subjected to heavy bursts of fire, corrected from the air, will almost certainly be out of the picture for a time, and may suffer losses that may force their withdrawal. It is well within the power of a mountain or field brigade, well handled, to neutralise the fire power of their opposite number.

In conclusion, it is emphasised that success in battle depends on the appreciation of the capabilities of the supporting arms. Only thus can a commander hold a true balance between the various ways in which artillery can give it support to the best advantage.

THE SO-CALLED FORWARD POLICY.

By "MOUSE."

"Any great power is ultimately forced to absorb barbaric states contiguous to its frontiers. This is the verdict of history."—C. Collin Davies, 1932.

"Frontiers are indeed the razor's edge on which hangs suspended the modern issues of war or peace, of life or death to nations."—Lord Curzon, 1907.

"It appears to the Government of India that the time has arrived when it becomes of extreme importance that an effort be made to bring under our control, and, if possible, to organise, for purposes of defence against external aggression, the great belt of independent tribal territory which lies along our north-western frontier, and which has hitherto been allowed to remain a formidable barrier against ourselves."—Government of India to Punjab Government, 1887.

The above quotations should be enough to show that I am not entering this controversy without the support of a few big guns. Before the days of broadcasted aviation the problem was simple; either the easy close-border system or the Forward Policy. Adherents of the former were content to sit behind the old Sikh demarcation, our present Administrative Boundary, whilst enthusiasts of the latter wished to push forward to the Durand Line. The Durand Line was fixed forty years ago, and, because our lack of policy—called the Forward Policy—has been so backward, nobody has ever seen it since. We have in the usual good old British way compromised. Those unhappy people rivetted to cool armchairs in Whitehall, New Delhi or Simla have found it comfortable to take both views; either butcher (now bomb) the beggars to hell, or bribe those gallant tribesmen so that we may have peace in our time, O Lat Sahib Bahadur. For the official or soldier on the frontier in direct contact with the tribes the problem cannot solve itself so agreeably. The soldier, rough, untutored and so licentious, has no axe to grind, no policy to enunciate and no avenue—Heaven's Light our Guide!—to explore; all he has to do is to sit tight. This he does with superb nonchalance. Occasionally—once a year at least—something goes wrong politically. And then the bugles blow, convoys creak, Brigadiers bulge, subalterns sob,

Generals germinate, sergeants swear, Majors migrate and the C. G. S.—or some correspondingly high authority—presses a button and all the Army on the Frontier buttons up his.....For what purpose ?

The Afridi, starving, has come down for food to the plains of India, seduced thereto by propaganda tales, mostly true, of weakness or abdication of the powers that be. The Haramzada Faquir of Allmyai—a lunatic and therefore more influential than an Amir—has chosen to fish in the troubled waters of the Swat river. An Afghan renegade, cloaked in the mantle of Islam, holds out promises of loot and heavenly bliss in the bazaars of Kandahar, Bannu or Khost. Anything, anywhere, anyhow is enough to raise a brave, mobile *lashkar* of young, well-armed impetuous men on that most unscientific border of India which wriggles from Hunza to Harnai. The result of these alarums is a few columns on the move, a few bombs, a few shots, and a *feu de joie* at a *Jirga*. The Government of India purrs contentedly, self-persuaded that its “dissuasive restraint” policy has once again vindicated itself, smooths its waistcoat and goes out to dinner. Only when its prestige is affronted brutally in Waziristan or its women threatened in Peshawar does it, the Government of India, stir itself to real forward policy action.

The fundamental reasons—now in 1933—for these tribal disturbances and our timidity in dealing with them are economic; they are hungry and we are broke. We have succeeded for the time being in protecting the Peshawari plains and the Derajat from the ravages of the tribes. We have now imprisoned our fellow British subjects between the administrative border and the frontier of Afghanistan. More thorough than that, we are now enabled to bomb blazes out of any one of them who comes down to India—desperate, armed, uncivilised and as savage as his grandfather of 1870—to grab sustenance for his children. Indeed, sometimes we feel we ought to bomb the whole parish because one or two parishioners have misbehaved themselves. At the risk of appearing sentimental, soft, and unsoldierly I would like to submit that this bellicose attitude on the frontier is wrong. It is sinful ; it is stupid ; and, worst of all, it is directly contrary to all our historical teaching of frontier administration. The punitive system was condemned by Lord Lytton in 1877 in the following words :

“ I object to it because it perpetuates a system of semi-barbarous reprisal, and because we lower ourselves to the ideas of right and might

common to our barbarous neighbours, rather than endeavour to raise them to our own ideas, because it seldom touches the guilty, and generally falls more heavily on the innocent ; because its natural tendency is to perpetuate animosity rather than lead up to good relations : because as a rule it leaves no permanent mark."

This opinion was provoked by the close border policy of scuttle and run punitive expeditions, and I honestly cannot see why it should not apply to some of our bombing operations. I admit that I am not air-minded in the accepted meaning of the term, but I try to be fair-minded and I, therefore, regard the tribesmen as people with whom our contact ought to be persuasive rather than explosive.

I contend that since 1893, when the Durand was fixed as our goal, we have never entered our enemy's twenty-five ; we have made a few missed drop-kicks ; we have dribbled ; we have scrimmaged. On three occasions we have made combined rushes with the forwards (the military), the halves (the Political), the three-quarters (the Government of India) and even the back (the Secretary of State) on the half-way line, all co-operating magnificently ; but every time the enemy has kicked a beautiful length for touch—and touched us for a few more lakhs. Our frontier policy has been merely tidal ; it ebbs and flows. With the notable exception of Baluchistan, the dubious exception of Waziristan and the Khajuri Plain peace of resistance our policy still remains a contemptible compromise between bribery and bullying. It has never been coherent, consistent or clear ; it has always been conceited, invariably chameleonic and, since the last decade or so, constipated. To make it move forward at all it needs a dose of trans-border terrorism, and then it moves reluctantly and with great labour. This language may appear extravagant, too emphatic and perhaps melodramatic ; I don't really care. When one studies—even casually—the history of the frontier, when one reads that *four* generations ago our wise and courageous forebears urged a forward policy and proved its blessings by their own splendid labours, when one hears incessant, perfectly phrased lip-service paid to such a policy and then, when one sees so little being accomplished, such tiny, timorous steps being taken, is it any wonder that a fellow becomes impatient ?

Sir Robert (and what a man !) Sandeman is the father of the forward policy and the present continual extraordinary tranquillity in Baluchistan is the edifice built on the foundations he laid fifty-five short years ago. There are those accustomed to the velvet lawns

of the Quetta Club, the *chikor* shoots near Torquan, the dreamy atmosphere of the Staff College and such Baluchi delights who will compare these civilised amenities with the rigours of Razmak and the blood-shot life of the Khyber. They will declare that the difference between the tribes of Baluchistan and those north of the Gumal River is the difference between a sheep and a wolf. They will assert that the Bugtis, Kakars, Marris, Achakzais and Suleman Khels are pacific, pastoral folk who obey their chiefs and love autocracy; but not so the other Pathans of the border. The Wazirs, Mahsuds, Afridis and Mohmands, the Orakzais, Yusufzais, Dawars and Tarkhanis are democrats, socialists, communists. They owe no allegiance, acknowledge no power greater than their own right arms, and are fiercely, fanatically independent.

I wonder. Indeed I wonder so much that I am prepared to take a perfectly safe small bet that if Lieutenant Sandeman had been posted as Deputy Commissioner of Peshawar instead of Dera Ghazi Khan in 1866 you and I would now be at a Staff College doing winter sports on the Safed Koh.

When Sandeman, a young man of less than ten years' service, broke the close border policy he met with great opposition. He was so zealous for the well-being of his people, so enthusiastic in his dream of peace, so passionate and so irrepressible that the Governments of the Punjab and India nearly wagged their heads off with disapproval. Nothing, however, succeeds like successful excess. One of his first tasks in Dera Ghazi Khan was to break the power of one Jamal Khan, a middle-man employed by government in its dealings with the trans-border tribes. This Tumandar was a thorough-paced scoundrel who hunted with hounds and ran with the hares and had conducted his villainy with such success that he thought himself omnipotent. Sandeman, after a long fight, broke him, and then started to clean up the border. This victory was Sandeman's stepping stone. And he rose on it from the depths of the riverain of the Indus to the highlands of Baluchistan.

He broke the might of the Marris, robbers and plunderers whom General Jacob described as "the worst enemies of the Khan of Kelat," and to whose charge was laid that "all is disorder, rapine and plunder on the Kachi side of the desert." Of the Bugtis Sir Lepel Griffin wrote "this was a tribe absolutely devoted to robbery." The Marris were outlawed and an award of ten rupees was offered on the Sind Frontier

for the capture of "any Marri." From Jacobabad, then a frontier post, to Dera Ghazi Khan, the Baluch border, was a sort of wild west Texas. The Khan of Kelat, a weak puppet, was being harassed by his Sirdars; all commerce from Afghanistan was the legitimate prey of his tribes, sub-tribes, clans, villages and even individuals. These same marauders swooped continually in large, defiant bands across the border, murdering, looting and escaping. And within ten years Sandeman stopped it. He established a peace, the most enduring, save the Ulster Settlement, in modern history.

How did he do it? I honestly cannot tell you. There are figures in modern history, Foch, Woodrow Wilson, Gandhi, Mussolini, Lenin, Montagu Norman, Hitler, Lloyd George, Hindenburg, al Capone, Amanullah, de Valera, Northcliffe—who, by sheer personality, apart from their several and often dubious gifts, have raised themselves and their followers from the common rut and brought something vital to humanity. It may be this something is too bad to be allowed existence but the personality that engendered it defies analysis. And so with Sandeman. He also was a visionary, but unlike some of the mixed crew I have cited above his visions were practical, his ideals were constructive and his aim was peace. It seems significant that his biographer, Thornton, wrote that Sandeman's policy was not a mere squabble between officials. "It was," Thornton records, "a protest against the existing systems of frontier management, against the uncompromising militarism of Sind and the "non-intervention-cum-expeditious" systems common to both Sind and the Punjab; and was a first step towards a new policy, a policy believed by its promoters to be more humane, more sympathetic, more civilising, and, at the same time, imperatively called for on grounds of public expediency." How Sandeman achieved his goal depended entirely on his methods and character. First of all he was a man, fearless, straight and with a preference for personal action rather than impersonal letters; secondly, he was a gentleman and had therefore the hereditary background for dealing with affairs, the certain indefinable quality which the tribes acknowledged instinctively; thirdly, he knew his own mind; and finally, he always continued to learn his job. He based his administrative policy on giving his support to the local chieftain, and, so long as his ally played the game, he was ready to back him up in all his troubles. "Trust begets trust," and Sandeman proved the truth of the proverb. Withal he was sympathetic, his sympathy based on his

knowledge of the tribes. He knew their code, he knew their ignorance and when they transgressed the law he brought them to book. But, because he dealt with the delicate tissue of a savage's mentality, his punishments were often absurdly lenient when compared with the standards laid down by the British India Penal Code. His judgments deserve study by penologists, for he made his enemies his friends and turned all Baluchistan from Jacobabad to Fort Sandeman into loyalty to the British throne.

The histories of Waziristan and the Tirah are sadly different. Of Waziristan it is impossible to write without heat. Never in any of our possessions except Ireland have we behaved so incoherently. We have had no settled policy, have blown hot and cold, have cajoled and cursed, bribed and beaten and now ten years after the occupation of its highlands—but I will come to that later. In 1889-90 Sandeman from the Zhob arranged with his great subordinate, R. I. Bruce, at Dera Ismail Khan to open up the Gomal and effect a circular road *via* Wano (now Wana) to bring the Kakars under one uniform administration and to improve our frontier communications. The scheme had the official blessing of a Viceroy who actually went up the Gomal on a horse. Shortly afterwards in furtherance of the project Sandeman held a Jirga at Appozai attended by all the local tribes, and by Waziris, Mahsuds and Sherannis who came in after some natural hesitation. The road from Fort Sandeman to Wana *via* Kajuri Kach was roughly aligned and *Mahsud* labourers were employed at Kajuri Kach. Half a lakh per annum was granted by Government to keep the route open and pay for the local khassadars. Sandeman died in January 1892, and the road is not yet open.

Since Sandeman's death our frontier policy has been theoretical rather than practical. We have accepted the forward policy because there is no other, but we have fiddled with it to the detriment of ourselves and the derision of the tribes. Our main stumbling block has been financial because it is a shock to our budget to demand a few crores for such a purpose; whilst, on the other hand, the dribble of money spent on expeditions and allowances annually for the last fifty years (amounting to say twenty crores) has been as imperceptible as a slow puncture. In Waziristan, following upon a triennial series of costly punitive expeditions we at last took the bull by the horns in 1920 and decided to occupy the place. We established impregnable strongholds, we built roads, we reoccupied the badly-treated Wana,

and we continue to build roads. We now enlist Mahsuds and employ the tribes in civilised employment. Waziristan is British territory—for about five hundred yards on each side of the motor roads. Yet in spite of all these efforts and the great expenditure the heart of Waziristan is to any military officer *terra incognita*. Why? Admittedly one can take a few khassadars as an escort and prow round the adjacent hills and that one meets with great hospitality and friendliness. But there are the great dark patches. If we do control the country—a supposition which I personally consider doubtful—why can't we move about more? Why can't I go outside my barbed wire at night? Why can't I take my company for a week-end in the hills away from the office, Brigadiers, telephones, clerks and all the other things that prevent me from being tactically mobile? If permission would be granted to the young company commander to move about on company training (his only pigeon in this over-administered age) on the condition that he passed colloquial Pushtoo and that his C. O., recommended him as not being a congenital idiot, I guarantee that not only would it lead to military efficiency but that it would have an incalculable political effect. There might be some regrettable incidents but these, I contend, would be minor in comparison with the annual ballyhoo which occurs whenever a faquir goes bolshy.

We are now the conquerors of Waziristan and our only desire is peace. There are no commercial, no political and no religious advantages to be wrung from that barren land. Any action we take there to preserve peace and ensure tranquillity is certain to have the blessings of the League of Nations and even the U. S. A. The most extreme sections of political opinion in England will applaud any effort to improve the conditions of life and employment in this sadly derelict portion of the Empire. There seems to be nothing to prevent an amiable forward policy except our imperial ingrowing toe-nails. Recent unrest in Waziristan shows that we are diffident, and so long as we are too timid to grasp the bull by the horns, so long to peace on the frontier!

Now for the Tirah. This is a more difficult question both ethnologically and geographically. The Afridis are more fiercely independent than even the Mahsuds. The Durand Line split their kinsfolk rather arbitrarily and left them convenient back-doors to walk down the gardens of Afghanistan. With them we have always adopted the "hands off" policy. All we have asked for is the integrity of the

Khyber Pass and the inviolability of British territory. History relates a sad tale of treachery, raids, broken promises, insults and invasion. Our first skirmish with the Afridis was in 1839, and from 1849 to 1898 there were eight expeditions to coerce them. In October 1898, an Agreement was made which bought peace at a price. The Maliks were on the whole loyal but were unable to oppose the intrigue of mullahs and anti-British propaganda, and in 1904 some desperate outrages occurred in British territory. In 1905 raids and murders, sponsored and concealed in the Tirah,—increased, and the Zakka Khels were as usual the prime movers. From 1905 to 1908 these outrages grew steadily in spite of all efforts to prevent them. In 1908 the Zakka Khels arranged a raid on Peshawar City and despoiled a Hindu *bania* to the tune of a lakh of rupees under the noses of political officers, police and military. Roos-Keppell, Sandeman's great successor, reported officially. "Year after year the evil has grown, and each year the necessity for punishing the Zakka Khel has become more pressing. Circumstances, larger questions of policy, and the natural dislike of Government to strong measures, have saved the clan from the punishment which it so richly deserves." He recommended the *permanent* occupation of the Bazar Valley. It is pleasant to record that the Viceroy, Lord Minto, agreed with this opinion. He wrote to the Secretary of State: "There need be no necessity for taking the country in the sense of forcing upon it British administration, collection of revenues, etc. We could simply hold it by the creation of one or two roads, or rather by the improvement of the existing roads by tribal labour.....and the establishment of a few advanced posts, leaving the tribesmen as heretofore to carry on their own tribal administration" (cf. Waziristan 1920—1933).

Our recent dealings with the Afridis are too fresh in our minds to permit dispassionate comment. We have managed to shut them up, which is, I suppose, an advantage, but a policy unlikely to lead to friendly relations when the pendulum of the Government of India swings back again to indecision and misplaced conciliation. A kindly light has forced us to occupy the Khajuri Plain. "One step enough for me, lead Thou me on."

What is the best solution of the frontier problem? There are several academies of thought, and it might be amusing to display them under their various mottoes:—

I. The Government of India Policy:—

Vigilate et orate. (Watch and pray.)

II. The Foreign and Political Policy :—

Cedant arma togae. (Let the military yield to the politicians.)

III. The Army policy :—

Aut vincere aut mori. (We'll conquer or die.)

IV. The Air Policy :—

Sic itur ad astra. (This is another road to fame.)

V. The Mouse Policy :—

Flectere si nequeo superos, Acheronta movebo. (If I can't ginger up the high-hats I'll raise hell.)

Of these policies there are various permutations and combinations with which we are familiar in general vague outlines. We know that the Politicals and Scouts have run the Frontier, and can do it so long as no forward movement is adumbrated; we know that the Politicals and the Air could run the Frontier, but I doubt if this combination would be conducive to a permanent settlement of the problem; we think that the blessed co-operation of all services can keep the cursed place quiet, as at present; and in the end the unadministered territory runs itself, and remains in this year of grace the most untidy, slipshod, dangerous part of the Empire.

For so far my criticisms have been destructive. I have not been fair. I have not acknowledged the great work done by political officers, soldiers, airmen and others who have ploughed the sands in the hope that their work would be permanent. I have ignored historical instances which might prejudice my case; I have quoted authorities suitable for my purposes. I have even been, I hope, unkind.

I plead forgiveness by producing that sterling motto: "*Flectere si nequeo superos, acheronta movebo*," and I submit in all humility and sincerity a constructive solution. It is open to any criticism. It may be derided by the more knowledgeable political officer, it may be abused by the more aggressive military officer, it may be ridiculed by the air officer, and it might even be laughed at by the Government of India. I pray that it does exhume these healthy reactions, because then I will know that I have made these people think about something which they are at present afraid to face up to.

My plan is necessarily based on a few assumptions. Firstly, the new Federation of India will extend to the Durand Line; secondly, the Forward Policy—from the point of view of a great civilised nation such as this Federation—is inevitable and, thirdly, I assume that we,

the British, wish to hand over to our successors a Defence Balance as secure and impregnable as the Finance Member's successive budgets. Our Defence Balance is shaky, and its weakness lies on the N.-W. F. P. If the covering troops immobilised in Chitral, the Khyber, the Kurram, Waziristan and the Zhob could be utilised for the normal purposes of military forces, instead of being the handmaidens of political (in its original sense) intrigue the Army in India could be reduced considerably. I submit therefore a plan; let us call it a Twenty Year Plan, and divide it into four phases.

1st Phase.—Inform Afghanistan of our intentions and seek Afghan co-operation and understanding. Warn and keep warning the tribes of our determination to penetrate peacefully their countries as far as the Durand Line. Warn them that in the event of opposition the most severe action will be taken *vi et armis*. Place the whole of the unadministered territory during these phases under a military governorship. For, as Sir William Barton points out in his chapter in "Modern India" (Oxford University Press), "the problem of the Afghan Frontier is in its essence a question of military strategy." A study of the occupation of the Sudan and French Morocco will show that a military *régime* is a necessary prelude to the civilisation of a savage country. Commence with Waziristan by opening it up; and as a preliminary to the settlement of the Afridi problem nip off that impertinent salient into British territory between Fort Mackeson and Kohat.

2nd Phase.—Learning from our successes and mistakes in Waziristan then deal with the Tirah and the Mohmands.

3rd Phase.—These events will have had their reactions in the States of Buner, Swat and Chitral and it should not be a difficult matter to persuade these at present mediæval territories to come into line with our peaceful forward policy.

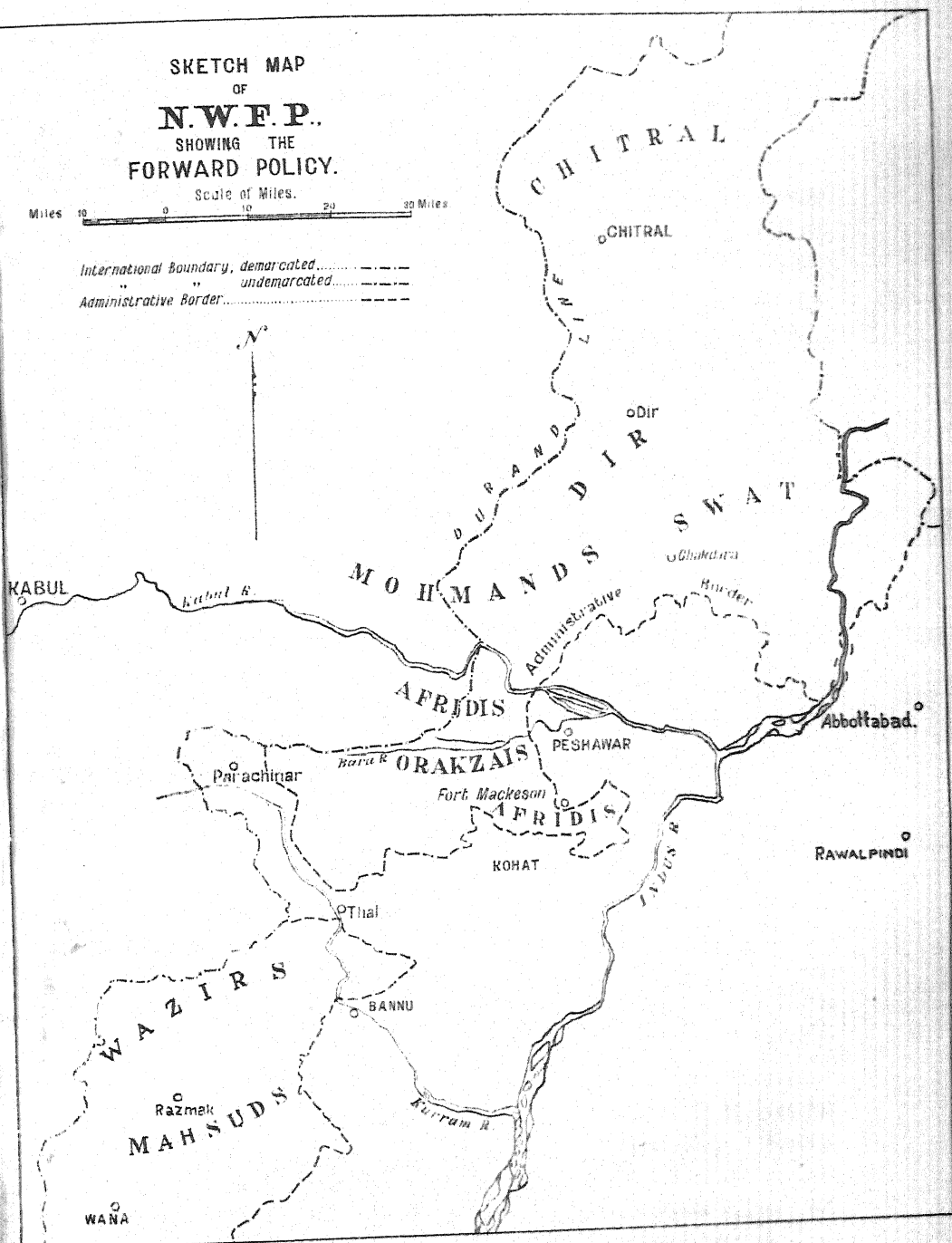
4th Phase.—Order general disarmament throughout the whole N.-W. F. P. as in British India, and after enforcing it hand the country back to the civil power.

Admittedly such a simple solution on paper teems with snags, but with resolution and money it—or any other planned advance—should not prove unworkable. To quote Sir William Barton, a political officer of thirty-five years' service twenty of which were in the N.-W. F. P. :—"As already observed, we have no definite policy with the tribesmen.....The ideal policy would be to

SKETCH MAP
OF
N.W.F.P.
SHOWING THE
FORWARD POLICY.

Scale of Miles.
Miles 10 0 10 20 30 Miles

International Boundary, demarcated.....
" undemarcated.....
Administrative Border.....



develop the indigenous institutions of the Pathan tribesmen into some form of rough and ready administrative machinery with which the authorities of the Indian Government could deal..... Government support would be necessary and this would involve expense. Indian statesmen will, however, have to realise that if the Frontier menace is to be exorcised it will mean heavy expenditure; education, economic and political development are the main things necessary if the Afridi, the Mohmand, the Wazir are one day to sit as Senators in the Imperial Councils."

This ideal policy can never be achieved until we move to the Durand Line.

I can now see the majority of my readers fingering their moustaches, rather sorry that I have given vent to such wild-eyed enthusiasm, bred on ignorance and fantastic ideals. They will assert—and I agree cordially—that such a plan is founded on theory and in the present state of India's finances is totally impracticable. But let us look ahead and take the long view, the horizon view on which all policy should be based.

If we do not *now* begin some sort of progressive policy, what will be the result in, say, thirty years' time? My outlook is pessimistic, because of a cursory reading of Indian history, a petty knowledge of Indian politics and my own prophetic conceit. I visualise a Central Government with an inevitable Hindu majority; a Muslim minority continually in opposition on religious and imaginary grounds; an army cut to the bone so as to make Federation safe for democracy; and, finally, a forward policy such as we have now only less so.

Then the Mahsud loots the rich cantonment of Razmak, or the Afridi occupies the Hindu bungalows of Peshawar, or the Achakzai raids the Staff College in Quetta. A crisis will develop. The Commander-in-Chief will demand strong action and fifty crores, and will be supported by the Central Government. And then, ladies and gentlemen, the sinister figure of Pakistan will rear his arrogant head.

It is idle and extremely foolish for anybody in India to shut his eyes to the Islamic movement which dreams of an Indian Muslim Confederation composed of the Punjab, the tribal territory (called Afghan), Kashmir and Sind. On such a pretext of war against the Muhammadans of the border an agitation, spreading through Provinces and States, will arise which will make Civil Disobedience look

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like a dhobi-ghat scuffle. Pakistan will have tremendous backing; it already possesses great resources in fighting men; and it still dreams of the old Moghul glories in Hindustan. It would split Federation from top to bottom.

I have written enough. For these reasons, kind ladies and scoffing gentlemen, I do feel most earnestly that we ought to remove all possible sources of irritation and infection before we hand the baby over to its wet nurses.

THE EVOLUTION OF THE MODERN ATTACK. THE FALLACY OF THE LINE.

BY LIEUT.-COLONEL O. G. BODY, D.S.O., R.A.

The rapid development of modern armament and its absorption into our fighting organization has led to great confusion of thought as to the handling of units and formations on the battlefield. The study of tactics as an art has been clouded by the introduction of a mass of new material with which to work and with which to produce new effects. In order to understand the true significance of recent innovations it is necessary to appreciate the old principles which have ruled the art of tactics since time immemorial ; for, by respecting those principles we shall comprehend more fully the trend of tactical thought and whither it is leading us.

Within the realm of tactics the first principle to accept is, that we must arm and organize all fighting units and formations primarily for the attack. The evolution of the attack therefore is the important study and to that aspect in particular the following short survey is confined.

Throughout the last two centuries there have been two schools of tactical thought, in constant conflict one with the other ; namely, those who have advocated the line formation in attack and those who have advocated the column. These two schools are still in conflict to-day. The three great masters of war who influenced the military thought of many succeeding generations were Frederick the Great, The Duke of Wellington and Napoleon. Of these, Frederick and the Duke were exponents of the line theory and Napoleon a wholehearted advocate of the column.

Frederick's success as a general was due to his perfection of battle drill. This enabled him to attain a greater degree of mobility on the battlefield. He attacked in line, but his increased mobility always enabled him to attack in flank on the restricted battlefield of that day. The line tactics of Frederick were not employed in frontal attack. Modern armies cannot expect to roll up flanks in the same manner. Strategical flank attacks hold good, but tactical flanks are not so clearly defined, neither can they be menaced by tactical manoeuvre to the same degree as they could before the advent of the machine gun and smokeless powder. Now tactical flanks belong to the lighter affairs of war, advanced guard and rear guard fighting and the gaining of contact phases. In battle proper when both contending armies are

seeking decision the bulk of the attacking troops are condemned to the tactical frontal attack although the movement generally may be that of strategical flank envelopment.

The power of modern artillery had not made itself felt in Frederick's day and the Infantry arm could advance to the attack without the careful preparation which is now essential.

The Duke was the great exponent of the line school and his tactical doctrine was carried on in the British Army as a holy tradition right down to the outbreak of the Great War—a tradition which stood us in good stead in the lighter affairs of colonial warfare. The Duke's great reputation in battle was, however, gained on the defensive, and, indeed, perhaps no one has ever excelled him in the conduct of the defensive battle. He opposed the attacking French columns with the line and defeated them again and again. The column seemed powerless against the vigour of the Duke's defence—the column met by the line and counter-attacked by the line.

The Duke also used the line formations in main attack, but there are few battles in which we can study the minor tactics of the attack as employed by the Peninsular Army. At SALAMANCA the Duke was all set for the defence when his master hand set his troops in forward movement at such short notice. That battle was in reality a gigantic counter-attack. Success was due to the exploitation of the principle of surprise rather than the inherent soundness of the tactical principles employed. VITTORIA provides us with an example of an offensive, strategical as well as tactical. Here the Duke's line methods met with complete success, and furthermore carried the attack to great depth. The French defended successive features right back from the ZADORA river crossings about the heights of PEUBLA to VITTORIA itself—some seven or eight miles. One of the main arguments against the line in attack is that it cannot penetrate to sufficient depth to achieve decisive results. But we cannot pin our faith on isolated instances of success.

The Duke exploited to the full the power of musketry both in attack and defence, and this reliance on the rifle certainly demanded line formation. The Duke did not use his artillery offensively as Napoleon did, but he used it very much as close support artillery is employed to-day. To the Duke the Infantry was the Army—a condition which no longer exists.

All Napoleon's military operations are characterized by offensive action—strategical as well as tactical. He was a rigid adherent to the column school. He fought with a national army, whereas Frederick and the Duke fought with highly trained professional armies. The column was undoubtedly suited to the mass psychology of the personnel at Napoleon's disposal.

The attacking columns were preceded by skirmishers whose duty it was to provide the fire which covered the movement; the artillery having pounded and weakened the enemy by concentrations of fire on selected areas. During the twenty odd years of the Napoleonic wars the number of troops deployed as skirmishers considerably increased, and this tendency went on in the Continental armies right down to the outbreak of the Great War when the bulk of the attacking troops were deployed to form a firing line behind which the supports and reserves moved in closer formation—in small groups approximating to the column, but not in such large packets as in the Napoleonic days.

The attack formation consisted normally of the battalion moving in close column of half companies, something akin to a battalion moving forward in close column of platoons, *i.e.*, about 16 to 20 files in frontage and about 20 to 30 files in depth. Although the Duke's defensive methods seemed to beat the column every time, yet Napoleon always held that the principle of the column was correct, and that the failure of the column against the British Infantry was due to the fact that in his latter campaigns the columns were too dense. With the raw levies he called up, he and his Marshals were compelled to increase the density of the columns, and brigade columns were often resorted to. He maintained that the correct answer to a more efficient small arms fire was to have less dense columns and more of them, and also greater reliance on artillery preparation. He wished to distribute his columns in greater depth and in smaller groups and not to expand them into line.

Napoleon was an artillery general. His tactics were combined artillery and infantry tactics, and not based on the consideration of the latter arm alone. Again and again he exhorted his Marshals to make more use of their guns. "Artillery wins battles" he frequently declared. Just as the Duke's faith in the line was the natural outcome of his faith in the rifle, so was Napoleon's adherence to the column the logical outcome of his dependence on the artillery to blast a way for

the Infantry advance. As attacking Infantry have become more and more dependent upon Artillery to provide the fire which covers their movement, and as the power of the rifle in attack has waned, so, most surely, have the arguments in favour of the column become more evident.

In the century which intervened between the Napoleonic wars and 1914 those armies which had developed their attack formations from the column had been compelled to break their columns into smaller and smaller groups and also to garnish their columns with additional skirmishers. The line, too, had opened out with intervals between the files, and the supports and reserves moving in rear of the firing line had been broken up into smaller groups. In some respects the two methods of attack tended to approximate into one and the same thing, but nevertheless there was still an essential difference in principle. If the difference between the British and the German attack doctrine is to be fully appreciated, it must be clearly understood that the one was developed from the line and the other from the column.

The foremost British troops comprised a firing line charged with the duty of delivering the assault. The German firing line such as it was, had been evolved from the old skirmishing line and was in effect a protective screen behind which the assaulting troops advanced.

In their evolution of the attack however, the Germans had gone a stage further. They had realized even at the commencement of 1914 that the skirmisher could no longer provide the fire to permit movement. The fire of the skirmisher had been replaced by the fire of the Machine Gunner, while artillery concentrations were employed in the true Napoleonic style. In the British army the attacking Infantry were still expected to provide the bulk of the fire to cover their own movement, while the artillery attempted to satisfy the requirements of the infantry by placing their fire from the deductions of immediate observation.

The Germans held their troops in bigger packets, advanced straight on to their objectives without indulging in a fire fight and broke into the defences in groups and not in line. The assaulting infantry's role was movement and the rifle was scarcely used in working forward. The assaulting groups were given far more adequate protection than their own rifles could give. They were preceded, not by skirmishers but by a framework of artillery, machine gun and mortar

fire. There is a popular fallacy that the methods of attack employed by the Germans were costly in life. This was not so. Nothing could vindicate their minor tactical doctrine better than a comparative study of the casualty lists in some of the major battles of the Great War.

The figures at the outbreak of the war are not available for accurate comparison. The official history gives the following figures for the main attacks of 1915:—

Second Battle of YPRES.

British losses. K. W. M.	.. Officers	2,150
	O. R's.	57,125
German losses. K. W. M.	.. Officers	860
	O. R's.	34,673

In this battle the Germans were attacking and the British and French were on the defensive. The French casualties, which must have been as big as our own, are not included, although the German casualty list includes the whole front involved. The Germans although employed in an unsuccessful attack were giving approximately three casualties to one received.

Loos.

British losses. Officers K. W. M.	..	2,013
O. R's.	..	48,367
German losses. Officers K. W. M.	..	441
O. R's.	..	19,395

At LOOS the British were attacking and the Germans on the defensive. These figures speak for themselves and show that the German Infantryman had a better fighting chance than the British.

The British attacks from Neuve Chapelle to the end of the Somme fighting were all "line" attacks. Old soldiers talking of these earlier battles will talk of the "first wave" the "second wave," etc., of an attack. In referring to the later attacks, Cambrai or the attacks of August 1918, they will not use such terms. There had been a marked change in our tactics after the lessons of the Somme had been absorbed. The instructions for the attack on 1st July 1916 stated that "each line of attacking troops must leave the trenches simultaneously, etc." The German official comment on the Somme fighting (also contained in the official history) states "great attacks were carried out in thick

and often irregular lines—to this must be attributed mainly the heavy losses of the British attacks, although they were certainly carried out with most conspicuous courage.” The line pervaded our whole conception of attack at this time.

As regards artillery fire, the barrage was a British development and the natural consequence of the Infantry attack formations developed from the line, whereas the Germans employed concentrations which followed the application of the column theory.

The battle of Cambrai, marked the birth of a new tactical era as far as the British Army was concerned. In the space of this short article it would be impossible to trace the various modifications and changes which have been gradually introduced and which make up the sum total of a great tactical revolution. The modern attack, “arranged in depth so as to retain power of manœuvre,” as Infantry Training explains, is nothing more than the attack arranged on the old column principle. Each successive edition of our training manuals marks a stricter adherence to the principle, but our equipment, organization and training still linger under the influence of the old line school, which is dying a very hard death. The fallacy of the line in the attack and all that pertains to it has now definitely been established. Much of the confusion in tactical thought which has occurred in these post-war years has been due to the fact that opinion has gradually veered round and few have understood the fundamental principles involved.

The role of the artillery remains much the same as heretofore. It is still the primary means of protecting the troops detailed to carry out the assault. The role of the skirmishers or Light companies has entirely disappeared and in their place we have the machine gun company and the tank. It seems likely that the machine gun company will develop into a fire support company in which mortars and anti-tank guns are also incorporated. The role of the fire support company will be the protection of the assaulting groups. If the artillery, the support company and the tanks fulfil their role, then the troops detailed for the assault will be able to proceed straight on to their objective, without the delay or hazard of being compelled to defend themselves during the approach by recourse to their rifles. The principle that the rifle companies should not open fire in attack if they can possibly continue to make ground is new to our manuals, and it is entirely contrary to the pre-1914 conception of building up a firing

line from the rear by pushing in supports and reserves, and the general conception that a fire fight must precede the assault.

The most recent edition of Section leading still divides the attack into five phases. The reconnaissance, the approach, the fire fight, the assault and the reorganization. The fire fight has no place in the column doctrine, and infantry should not be taught to look for it as a definite phase in the attack. This is an instance of the lingering influence of the old line school of tactics and it contravenes the principle that fire should not be opened with the rifle in attack if progress can be made without it. The section must advance in file and not in line. It assumes line formation only when it is compelled to defend itself. The column adherents have always attempted to guarantee the assaulting columns adequate protection from enemy fire so that they can retain their power of forward movement right on to their objectives. Umpires seldom let attacking infantry in on to positions until they have completed the fire fight phase. Infantry advancing on to their objective are invariably "blue flagged" half-way between the starting line and the foremost defended localities. If rifle fire has to be resorted to at this stage, then the covering fire has proved inadequate, and the attack definitely has failed.

The institution of the fire support company and the abolition of the Lewis gun as a platoon weapon are two immediate developments which the wholehearted application of the column theory demands. This will make for much greater speed in the attack and give it greater cohesion and impetus. The platoon commander cannot effectively control sub-units so distinct and separate in character as the Rifle section and the Lewis gun section. They must be charged with the responsibility of providing movement, while the fire to cover that movement is guaranteed from other sources.

A multiplication of instances in which the two great schools of tactical thought are in conflict cannot be entered into here. The appreciation of the fact that all that pertains to the old line theory is dead, and that the modern attack is based entirely on the column theory will give the correct answer to many of the problems concerning organization and tactical handling which are in doubt to-day. A distinct and separate relationship exists between the various arms and weapons according to the origin of the tactical doctrine applied.

THE CAPTURE OF KHAZANA GHUND. A FRONTIER EPISODE.

BY "SHIGGADAR."

It was in September 1916, after a prolonged sojourn in India, which was happily shortly to be brought to an end by the move of my regiment to Mesopotamia, that I found myself on detachment at Abazai with my company and a troop of cavalry. Abazai is, or rather was, one of the old mud forts built during the Sikh occupation of the North-West Frontier, situated on the left bank of the Swat river where it debouches from the hills of Swat. It has since been pulled down, but in days gone by my regiment kept a permanent detachment there. Across the river is Mohmand country, of which the Swat river forms the northern boundary, separating that tribe from the Utman Khel who occupy the hills and glens on the Abazai side of the river. North of, and close to, the fort lies the frontier village of Abazai and half a mile further up the river is Munda, a small Frontier Constabulary post guarding the headworks of the Lower Swat Canal and the weir, which latter in 1916 was under construction.

For some months past work on this weir had been constantly obstructed by Mohmand tribesmen, who used at intervals to occupy a hill called Khazana Ghund, which overlooks the weir from the Mohmand side of the river, and shoot up the coolies at work on the weir—just for the fun of the thing. Whenever this happened the coolies naturally bolted and the work was held up until others could be collected to take their place.

These periodical shooting matches became such a nuisance that negotiations were set on foot with a view to inducing the Mohmands to agree to handing over the ridge, of which Khazana Ghund formed the northern peak, in return for a consideration. The Mohmands, however, refused to surrender an inch of territory on their side of the border under any circumstances and announced, moreover, that if we ever set foot across their border in this vicinity they would resist with all their souls and with all their strength. To what extent the Mohmands fulfilled this typical frontier tribesman's boast, will be seen later.

At this time the Mohmands were thoroughly above themselves. They had been constantly raiding our border villages; and things

eventually got to such a pitch that Government decided to take action against them by a complete blockade of the tribe, to be effected by the construction of a barbed-wire line, with posts at intervals occupied by regular troops, right across their border from the Swat river in the north to the Kabul river in the south, a distance of about 13 miles. In conjunction with the erection of this blockade line it was decided to settle the question of the Abazai weir once and for all by occupying the Khazana Ghund ridge and by constructing on it three 'pucca' blockhouses, the northern one of which was to be on Khazana Ghund itself.

When I arrived at Abazai at the beginning of September this plan had just been decided upon and I was sent for by the Brigade Commander, whose headquarters were at Shabkadr, another fort seven miles along the Mohmand border in the direction of Peshawar, who told me that my company at Abazai would have to carry out the occupation of Khazana Ghund ridge and that it would be our job to afford protection daily for a fortnight or more to the civilian labourers who were going to build the three blockhouses.

After some discussion the Brigade Commander decided that two companies would be necessary for the job and he said he would order another company of my regiment to join me at Abazai. Meanwhile he told me to go away and think about it and to make a plan, which I was to submit to him in due course, and he warned me to keep what he had told me secret.

I rode back to Abazai that afternoon and the following morning accompanied by an Afridi Subedar, I went up to Munda post to have a look at the ground from there. We had a good look at the ridge through our glasses and as we could see no sign of life about we decided to risk it and do a reconnaissance of the ridge itself. We crossed the river by the foot-bridge over the weir, climbed up on to Khazana Ghund and thence walked along the ridge to the far end and down by a spur on to the open ground on the right bank of the river; and so back to Abazai, crossing the river again by the ferry opposite the fort. We had not stopped long in any one place, as we naturally did not want to attract attention, and this was the only occasion on which I had a chance of looking at the ground before the operation eventually came off.

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I rode back to Abazai that afternoon and the following morning accompanied by an Afridi Subedar, I went up to Munda post to have a look at the ground from there. We had a good look at the ridge through our glasses and as we could see no sign of life about we decided to risk it and do a reconnaissance of the ridge itself. We crossed the river by the foot-bridge over the weir, climbed up on to Khazana Ghund and thence walked along the ridge to the far end and down by a spur on to the open ground on the right bank of the river; and so back to Abazai, crossing the river again by the ferry opposite the fort. We had not stopped long in any one place, as we naturally did not want to attract attention, and this was the only occasion on which I had a chance of looking at the ground before the operation eventually came off.

I had decided to take the Afridi Subedar into my confidence, as I knew I could trust him and I also knew that he was the best man I

could have found to assist me in making a plan for this particular kind of operation. My confidence was fully justified, as events proved later, and this Afridi's experience and knowledge of Pathans and their ways were invaluable.

As the result of my reconnaissance I discovered that the Khazana Ghund ridge was about half a mile long and was separated from the main Mohmand hills by a valley 300 to 400 yards broad and thus formed a very strong and commanding position. The average height was about 350 feet and the slopes were easy and covered with loose round stones, but there were no large stones or rocks suitable for building piquets. At its northern end was Khazana Ghund, a small circular peak artificially built up and evidently of Buddhist origin, whence the ridge fell precipitously down to the Swat river below.

In thinking over a plan for affording protection for the work which was to be done it struck me as obvious that, having once established oneself on the ridge it would be asking for trouble not to stick to it permanently, as if we evacuated it each evening, as was the original intention, it would probably mean fighting a battle each day to retake it.

I estimated that for permanent occupation six platoon piquets would be necessary and I found a good site for a camp for the reserve, close to the river and easily defended at the foot of the ridge. Moreover, I decided to occupy and consolidate the ridge during the hours of darkness.

The following day I rode over to Shabkadr again to see the Brigadier and explain my plan, which he approved. He told me that the erection of the blockade line would commence the day after the taking of Khazana Ghund, which would be a separate operation, and that zero day would be in about a fortnight's time. He also said that owing to the bellicose attitude which was being adopted by the Mohmands generally he had decided to increase the size of the Khazana Ghund force by the addition of the remainder of my battalion and a section of a Mountain Battery. The additional infantry would arrive on the morning before the operation took place and the Artillery would reach Khazana Ghund from Shabkadr at daylight on the morning after the ridge was taken.

Meanwhile I was to work out details and make all the preliminary arrangements for the night operation. The Brigadier subsequently

agreed to the Machine Gun troop of an Indian Cavalry regiment with which I had always been closely associated and who were very anxious to take part in the 'stunt' being included in the force, and it was decided that they should come up on the morning following the night operation.

A day or two later the other company of my regiment, which had been previously ordered up, arrived at Abazai. The Company Commander, who was known in the regiment as Harry Fragson (or 'Fragger' for short) owing to his alleged likeness to a music-hall comedian of that name, and who was subsequently killed in Palestine, was a first class soldier and a most delightful companion and we spent many long and humorous hours together working out details. Various difficulties confronted us, the first and foremost being how to get across the river. There were two possibilities. We could either cross by the foot-bridge at Munda, which would lead us almost directly on to the hill, or we could cross by the ferry at Abazai fort.

The former had two disadvantages: firstly, that it would necessitate our moving through Abazi village immediately after leaving the fort, which would give the show away at an early stage, and secondly that should the foot-bridge be held, even by a few armed men, we should have considerable difficulty in getting on to the hill at all. We therefore ruled it out.

The ferry on the other hand was safe enough as it was well inside British territory, but it had one grave disadvantage, *viz.*, the time it would take to get the whole regiment across in a single ferry boat. We had often crossed with the regiment this way before and in daylight, it always took at least four hours, so we could not rely on crossing at night in under about six hours. This, combined with a march of a little over a mile across a stony plain and then the climb up the hill, would result in our only just reaching our piquet positions at daylight, thus leaving no time to construct the piquets before it got light.

So that was no good. Eventually after a lot of thought and discussion we decided that the best thing to do would be to establish a battalion camp on the other side of the river on the morning previous to the operation and to endeavour to bluff the local inhabitants as to our real intentions. News travels with amazing rapidity on the frontier and trans-border tribes always have their spies in frontier villages, hence the necessity for caution.

The next difficulty we had to consider was the building of the piquets without suitable rocks or stones. On the ridge the stones were all small and round, such as one finds in a river bed, and they would not do for building sangar walls; and the ground too, was too hard for digging. This seemed to us an insuperable difficulty and we racked our brains for several days on end without result. We thought of brushwood gabions, but they were too heavy to carry up, and we thought of all sorts of other things, but they were all no good. At last a brain wave—why not gabions made of rabbit wire? They would be light, very easily made up and should serve the purpose admirably. Fortunately there was plenty of rabbit wire available, supplied like everything else we wanted by those handy-men, the Irrigation Engineers, who were building the weir, so we worked out how many gabions we would want for each piquet, cut the wire into the required lengths, joined the ends by interlacing them with thin bamboos, squashed them flat and tied them up in bundles suitable for man loads. So that was that.

Next we had to consider what we were going to do about wiring. We had plenty of barbed wire but no stakes. The Irrigation Department offered us wooden stakes, but the ground was too hard for them on the hill top, so what were we to do about it? Regimental brains again set to work and this time decided on knife-rests made up of light bamboos produced out of a godown by our general provisioners, the Irrigation Engineers.

And so for several days on end our soldiers were busy within the privacy of the fort wall making up knife-rests, no less than 120 of which they manufactured and eventually carried up the hill. Thus was another difficulty surmounted.

All this time we were doing all we could to keep our intentions secret and though we cast many surreptitious glances through our field glasses at the promised land, we took good care that no one noticed us doing so. Actually the only people 'in the know' were our two selves, the Afridi Subedar, and the two Irrigation Engineers—'Biggo,' the underling, and 'Frankie', the big noise. The former was a very solemn but extremely amiable and efficient canal officer and the latter a very spirited and amusing little Irishman, who had been out with us before on a small frontier show and had received an honourable mention for his ingenuity in fixing up "Heath Robinson" flares and booby-traps around our camp. These Canal Officers, in addition to

their ordinary work, were busy making arrangements for the three blockhouses which were to be constructed under their supervision and also for the live-wire line, the erection of which they had agreed to undertake right across the Mohmand border from the Swat to the Kabul river (in front of the barbed-wire line), the current being provided from the Canal Power House which was then in existence at Abazai.

One afternoon Frankie asked us to go out and watch a demonstration of the efficacy of this live-wire line, a section of which he had erected for experimental purposes between the fort and the village, and he told us to collect all the sepoy and villagers we could get hold of to watch the show. Accordingly we all assembled at the spot to witness the execution of a miserable goat, which had been purchased as the victim for electrocution.

In due course Frankie and Biggo arrived upon the scene, followed by the goat and several babus armed with sticks and umbrellas. When all was ready and the current had been turned full on the goat was urged to advance to his doom. This he was very unwilling to do, but after a series of shooings and proddings from the assembled babus he skipped gaily forward towards the wire. We all held our breath, expecting to see a flash, a sizzle and a dead goat, but what actually happened was that the goat, after tripping when he came to the wire, pushed his way through it and came out smiling—or rather bleating—on the other side. This performance was repeated three times, more volts, amperes and what-nots being added on each occasion, but the goat survived and was apparently none the worse at the end of it.

Then we went home, looking very solemn and trying not to laugh. What the reason was for the tenacity of this particular goat I was never able to discover, but the same could not be said for the Mohmands, for when the live-wire line was afterwards erected across the border, the first two Mohmands who had the temerity to endeavour to get through it were laid out as dead as mutton. After that they gave up trying and rumour had it that Frankie and Biggo were afterwards known in Mohmand country as the 'sparking plugs'.

Meanwhile we were collecting what information we could about what the Mohmands were doing and thinking, chiefly from a Border Police havildar who was attached to us for the purpose. This havildar was always very inquisitive about the occupation of Khazana

Ghund, which he knew was in the air, and as time went on we began to get suspicious as to his reliability.

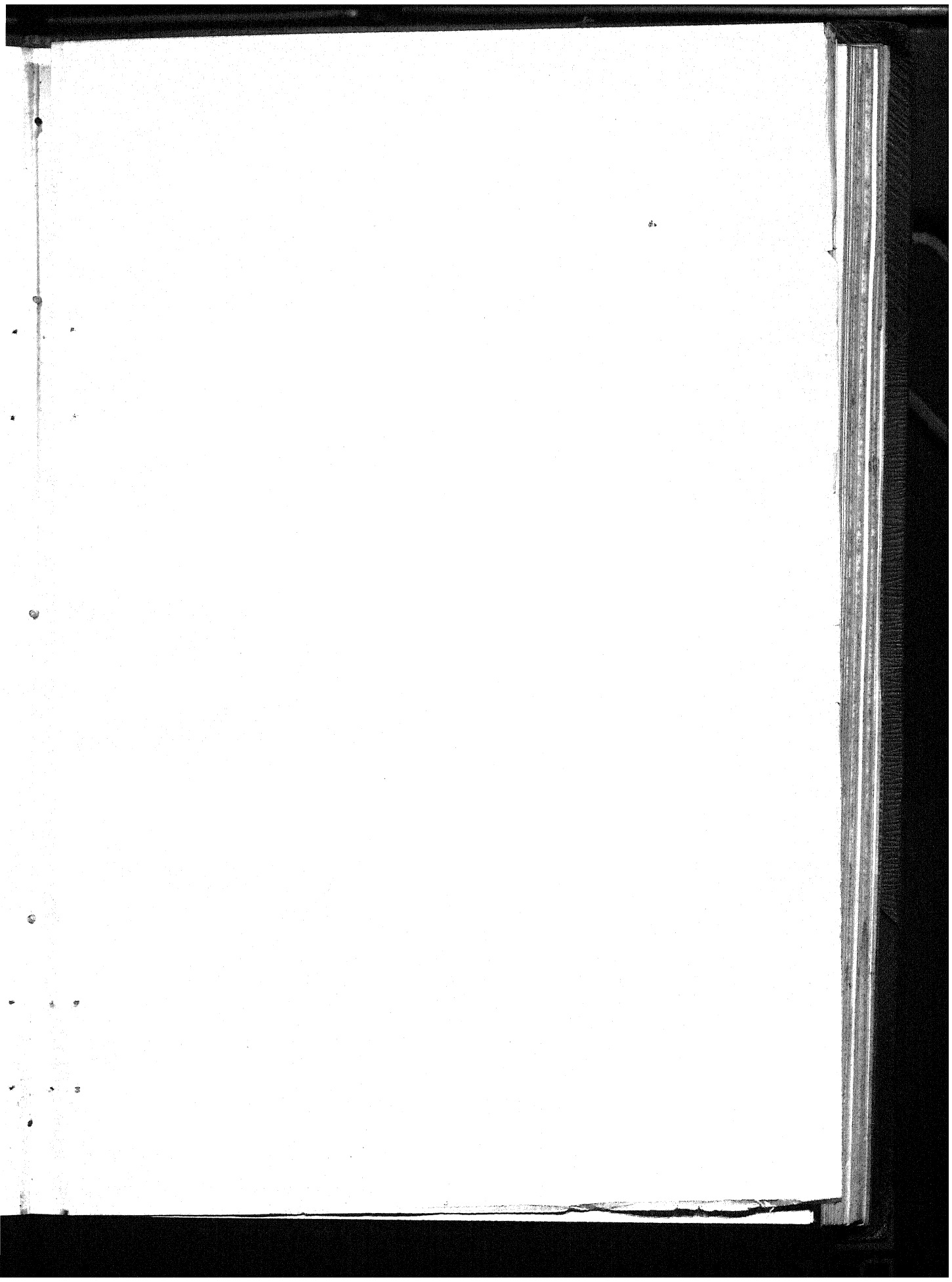
A week before the operation was due to take place, the Chief Commissioner came out to Abazai from Peshawar and insisted on our taking him to Munda to have a look at Khazana Ghund. When we got there we went on to the roof of the Frontier Constabulary post and there, in front of everyone, the Chief Commissioner gazed at the hill and discussed its occupation, fortunately in English of which in those days the man of the mountains did not understand a word.

This episode, we felt sure, would give the whole show away unless we did something about it, so, at the suggestion of the Afridi Subedar who was a great deal wiser man than either of us, we decided to practise deception of a very unmilitary character.

The Subedar had discovered that the Border Police Havildar was married to the sister of a Mohmand Malik and he said he was sure that any information the Havildar got from us was going straight to the Mohmands. He suggested therefore that if we were to make the Havildar believe that the hill was not to be occupied, the Mohmands would probably believe it too. So the Havildar was sent for and was assured by us in all solemnity that, whereas it had formerly been our intention to occupy the hill, the Chief Commissioner had decided as the result of his visit that it was too difficult and the operation had consequently been cancelled. The Havildar went away duly impressed and the Afridi Subedar gave him still further assurances in private, conveying the impression that in reality the Sahibs were frightened of the great Mohmand tribe.

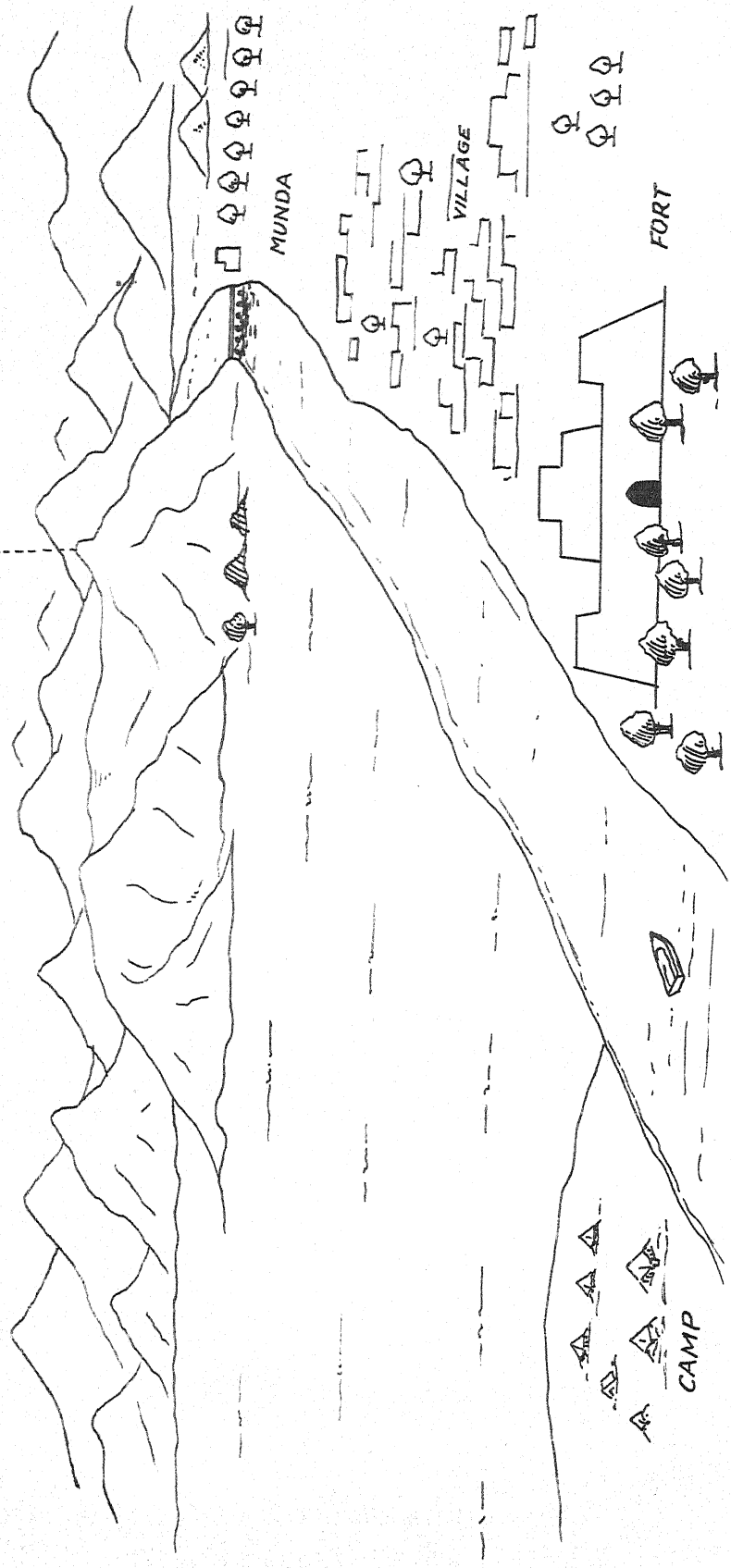
A day or two after this Biggo unwittingly nearly upset the whole apple cart by dumping a large stack of bricks at the foot of Khazana Ghund on the Mohmand side of the river. Next morning Mohmand tribesmen were seen on the ridge and we thought all hope of affecting a surprise was gone for ever. However the bricks were hastily brought back, the Mohmands went away and the Havildar was assured that this was merely a mistake on the part of the Canal Officer who had not heard that the show was off! So all was well for the time being.

The transportation of all the material for the construction of the blockhouses was a difficult problem which had to be solved somehow. It meant moving the bricks from Abazai by man-propelled



ROUGH SKETCH OF RIDGE

KHAZANA GHUND.



trucks on a miniature railway up to Munda, and then carrying them by hand across the footbridge over the weir, whence they would be transported up the hill on donkeys.

One night after dinner we found Biggo involved in abstruse calculations. He worked for about an hour and then announced with a woebegone smile that he would have to carry up a million pounds of bricks and only had thirty donkeys to do it with; moreover, that the donkey drivers were unreliable and would probably all bolt when the first shot was fired. This was such depressing news that I rode over to Shabkadr next day and managed to arrange for some Government mules and also the promise of a company of Pioneers to assist in the building of the block-houses. These Pioneers subsequently proved invaluable.

Another thing we had to think of was how to afford protection for the masons while they were working in the event of sniping.

The Canal Department again came to the rescue and produced some large iron sheets, which we eventually erected with some difficulty on the piquet walls, but which, as things turned out, were not actually required.

We had great difficulty in raising any bombs; although the Great War had been going for over two years, these everyday weapons of offence had not yet penetrated into India. However by making friends with a kindly Sapper subaltern at Shabkadr we managed to secure a small number of jam-tin bombs of local manufacture and also a few flares.

Zero day was now approaching and we had worked out all details about stores, carrying parties, etc., for each piquet and had drafted orders for the night operation. We had discussed various ways of advancing up the hill, as there were three distinct spurs which were possible routes, and we finally decided—and I think wisely—to use only one route, the spur furthest from the river and to drop piquets as we went along. This would take longer than a simultaneous advance up different spurs but it would eliminate all chance of a battle-fight in the darkness between separate parties of our own men. I made a rough sketch map of the ridge on which I marked the positions where I thought piquets should be located and a copy of this map was subsequently given to each British officer. The day before Zero I gave out that orders had been received for the regiment to

march to Shabkadr in two days time, complete with all the knife-rests which were required by the Brigade Commander, and that afternoon I established a camp on the other bank of the river and close to the ferry and moved most of the stores over to it.

On the following morning the rest of the regiment marched in and it took most of the day getting the men and the remainder of the stores and knife-rests across the river on the ferryboat.

We explained the whole scheme to the C. O. and other British Officers and two hours before sunset the Indian officers and men, who up to that moment were under the impression that we were marching to Shabkadr next day, were told what they had got to do.

Company Commanders had a very busy time detailing men for protective duties, working parties and carrying parties and they were still at it when darkness set in. A small guard was to remain at our temporary camp, which was to be moved to the foot of the ridge next morning.

The secret of the operation about which we were about to embark had been well kept and our Border Police Havildar had been so thoroughly bamboozled that he was quite convinced that we were off to Shabkadr next day. We heard afterwards that when some time that night he was told by a villager that the regiment was going up Khazana Ghund, he betted his informant a rupee that it was't true! Nevertheless we had no idea whether we should meet with opposition or not during our night advance.

At 8 p.m., the battalion fell in and started the march to the foot of the ridge, a long and straggling column in which every man seemed to be carrying something, for 240 men were required for the knife-rests alone and there were plenty of other stores to take up in addition. The night was very dark, there was no path and the ground was rough and stony, which caused much tribulation to the knife-rest carriers who were stumbling and falling all over the place. Fortunately the night operation prohibited all speech, otherwise the air would surely have been scorched by the curses of these unfortunates.

We had a short halt at the foot of the ridge to enable the Afridi Subedar, who was leading the column, to find the best route up; then we slowly and cautiously climbed the ridge, expecting each moment a volley from above. As we climbed we heard a noise like

thunder across the river, which proclaimed that Frankie and Biggo were busy pushing their bricks up the railway line to Munda. This frightful commotion we thought would surely awaken the whole Mohmand tribe, but nothing happened and we reached the summit of the ridge without opposition and hurried along the top dropping piquets as we went.

As each piquet got into place, it put out its covering party and building operations started, the men working like beavers.

The rabbit wire gabions proved an immense success and we soon had a solid breastwork of them round each piquet, on top of which we put sandbags filled with rubble for there was no earth available. As soon as the walls were complete, the knife-rests were put in position round them and securely wired together, and before morning we had six quite good piquets built and wired and were ready to take on all comers. But what of the Mohmands?

Needless to say we anxiously awaited the dawn, to see what we should see, but when daylight came we saw nothing—not a sign of a Mohmand anywhere!

I was with the piquet on Khazana Ghund and with the dawn came Frankie with his babu and the masons who were going to build the block-house there. Frankie marked out the trace in no time and his men started off at once digging the foundations. They were extraordinarily quick off the mark and by that evening the walls of the block-house, which was inside my piquet, were three feet high. These building operations caused us a good deal of discomfort and every evening when the work was over for the day we had to clear up the mess before we could find room to lie down. That morning we had a succession of visitors, including the Chief Commissioner, and one of the first arrivals was our old friend the Border Police Havildar, who met me with a sickly smile and said "Sahib, you *have* done the dirty; I would have expected this from a Politician, but not from a soldier."

Poor man, he had been properly 'had' and it is my everlasting regret that I never heard what his wife said to him when he got home.

Amongst various celebrities who visited Khazana Ghund was a Secretary in the Government of India, who caused much merriment by enquiring whether we had made use of hurricane 'Butties' to light our way up in the dark.

The following day the Staff sent us up an immense search light, complete with a British sergeant in charge. This was placed with much ceremony in Fragger's piquet which was next to mine. Fragger didn't like the look of it much and the sergeant was obviously frightened of it, and when that night it let off a resounding explosion and nearly blew the two of them over the piquet wall, they hated the contraption even more.

Meanwhile the work on the blockhouses progressed rapidly and the Mohmands, so we heard, were running about Mohmand country trying to raise a lashkar. Nothing happened during the first two days and not a sign of a Mohmand was to be seen, but on the afternoon of the third day figures began to appear on the hill tops and a few snipers started to fire in our direction.

They found it very difficult to get nearer than about 800 yards however, for to do so meant exposing themselves on the forward slopes of the hills opposite us and those who were bold enough to try it were met with such a blast of rifle, machine gun and, sometimes, mountain gun fire that they soon scuttled back under cover. They tried this sniping spasmodically for the next day or two and then chucked it, evidently realising that our position, which we were rapidly strengthening with more barbed-wire, was impregnable.

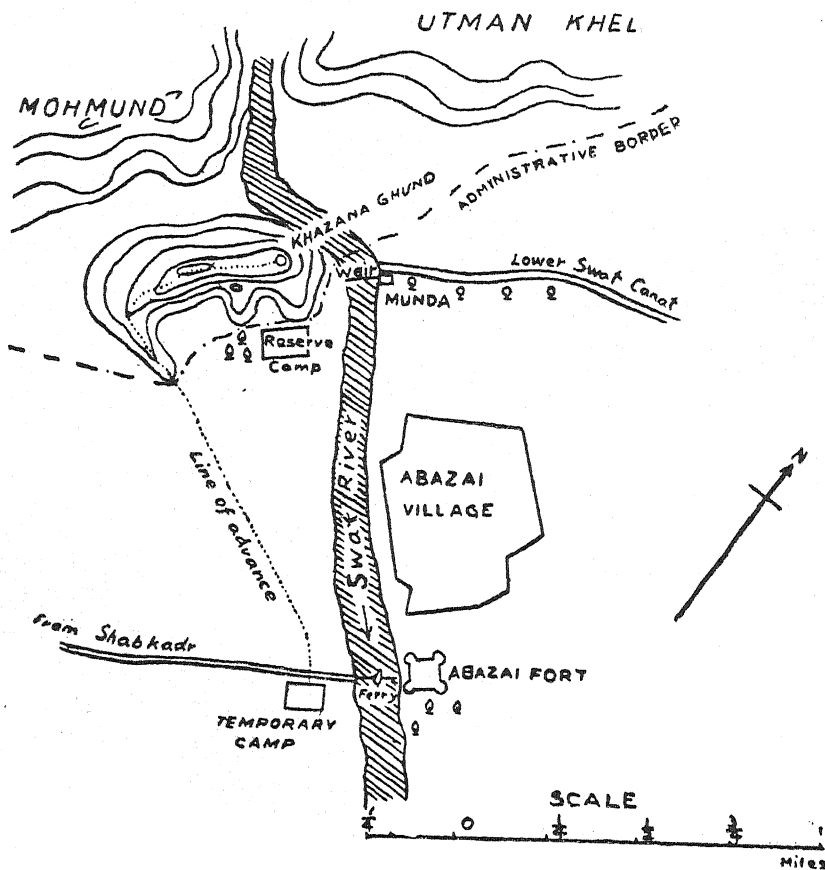
And so the days went by and in just over three weeks the blockhouses were complete and ready for occupation and we left the ridge for good. During this time our total casualties were one sepoy hit in the leg and one Canal babu, who was sitting on a block-house wall singing a lullaby and thinking of the girl he'd left behind him, wounded slightly in the hind quarters. He was a proud man afterwards, was that babu, and many were the yarns I expect he told when he got back to his village of fierce fighting on the Mohmand border.

Thus ended a battle without bullets, a very pleasant episode with quite enough excitement to make it interesting and none of the danger and bloodiness of real war, the happiest recollection of which will always be, to those who took part in it, the ever ready co-operation of our friends in the Irrigation Department.

Old Abazai fort is now no more and the Power House and live-wire have long since been removed; all that now remains to remind one of this frontier episode are the three block-houses sticking up on Khazana Ghund ridge, trying to look as if they had always been there.

But in Abazai village, if you ask for the headman's house, you will find sitting under a tree in the courtyard a fat little old gentleman with twinkly eyes and an immense loyalty to Government, who will always remember, and often talks of, the four mad sahibs—two soldiers and two civilians—who conspired to erect more bricks and mortar upon the 'bloody border'.

SKETCH SHEWING ADVANCE TO KHAZANA GHUND.



A FIRST DAY'S PIG-STICKING.

BY "NEW HAND".

It was April. I happened to be paying a little visit *en passant* through Central India. We were recuperating in the Mess one evening when the leader of the local Tent Club came in and said there was a meet on the Sunday and what about it.

I must admit here and now, that this struck me as a leading question. What with the old grey hair, the baby farm at home and I being dismounted branch, etc., my first inclination definitely was to cry off, especially as all the company had a decidedly professional and horsy look about them. However, it did seem a marvellous opportunity and so I hesitatingly accepted.

An excuse that I had no horses cut no ice at all, the leader of the Tent Club offering to mount me at once. In the light of what came after, this was a truly noble action on his part, for people don't usually offer their best pig-stickers to unknown strangers to ride over ghastly country, with a large risk of losing them lame for the rest of the season.

Thus committed, the next step was to take aside the Leader, as I shall call him for short, and confess the whole situation—that I knew absolutely nothing about pig-sticking, had never even seen a pig, and so on. His nobility was merely accentuated thereby. He told me all about "heats" and pig-sticking tactics and which end of the spear to hold and many other things. I had some grand practice sitting on a chair and spearing oranges. I rather wondered at the time what you did if the chair swerved or bucked but by this time had become so enthusiastic that little things like that couldn't put me off.

So bright and early on the Sunday we set off, a party of nine. A storm overnight had taken some of the bone out of the ground and left the air cool. We drove out about 12 miles and coursed a sambhur doe and her bachha for about a mile on the way, for she wanted to cross our road to her jungle and couldn't quite beat our lorry. A pretty sight they were.

Arrived at the meet, I was introduced to my transport for the rest of the day, a spirited looking animal, which I must confess let me mount quite nicely with the aid of two syces. The spear I thought

rather got in the way. However, there we were and we jogged on a mile or more to the rendezvous with the beaters, near a little village.

Here a fine old man, whom I was told had run the beats for upwards of half a century, conferred with the Leader as to the days plans. There were to be three beats, two before lunch and one after. The first two were scrubby hills, the third a wide patch of jungle. The way in which the old man distributed his orders to 60 odd beaters would have been a lesson to Staff College candidates.

We then moved off to our first positions. We were divided into three heats of three spears each. The Leader kindly took me, with one B———as our third. We were trotting past a patch of scrub and discussing world politics when a most ridable boar (they told me afterwards that it was (a) boar and (b) "ridable"—all I could see was a pig!) darted out of the scrub. The Leader and B———appeared to me to become suddenly mental—I learnt subsequently a sure sign of a true pig-sticker—at any rate off they went at what seemed to my eyes a lunatic pace over bushes and rocks after this pig. I did a brave best to follow:—"George", I said to myself at this point, "I wonder if this really is your metier!" The pig made first towards the hill which the beaters were about to drive. B——dived into a sunken pit and nearly crashed. The Leader, however, got near the pig and got him with what they said was a poor stroke, a surface prick in the hindquarters—but then, horror of horrors—the pig swung right handed, towards the village, and joined a herd of tame ones! The Leader was rather shaken. Not until lunch time, when the owner wanted backsheesh for his dear pet, raised so carefully from infancy, would our Leader admit that it had all been a mistake. Bad luck on him really, as I couldn't see how anyone could tell.

However, all this was only a curtain raiser. We rode on to lie up at the far end of the first hill, the three heats ready to ride any pig that might break across the fields to the hills beyond. The sight of fields filled me with hope. Even I could ride over fields.

We sat down and waited, each heat supplied with a man up a tree as scout. We sat I suppose for 30 minutes while the beat drew closer. Deer of various types darted along. Last year this beat produced two panther so a gun went with the beaters but this year all he shot was a peacock and some hares. Presently an excited "Sahib, Sahib" from the tree caused us to spring to our horses, only to see a largish pig break in the sector allotted to the heat on our right. We

had a fine view, however. Capt. A——galloped his line leisurely for a mile or so and then closed to spear. The pig, wounded, charged his pony and carried its forelegs, bringing rider and all nicely to ground. The supporting spears, however, soon killed and the heat came back to position. It was pretty exciting to watch.

Meanwhile, while we were sitting, suddenly two pigs came out on our near left and peered about. Like an idiot, I moved my hand. That was quite enough and back they darted again while I got a round curse from the Leader. However, presently they came again, but by this time it had been agreed they were just too small to ride and we let them by.

The beat produced no more, and neither did the next and we rode back to lunch definitely disappointed. When after lunch in the main beat we also viewed only a few small fry, it seemed a poor day. However, about 3 p.m. beaters and heats formed one long line to walk a rocky scrubby ridge back to the lorry. We had done this for some time when suddenly there was a great shout from somewhere and a tidy boar came rushing back through the line right through our heat. In about two seconds the whole scene was transformed. A couple of spears from other heats joined in and off we went on the craziest ride I have ever conceived possible.

The odd bit of hunting at home and in Ireland seemed child's play compared to it. There wasn't literally a yard of decent going, rocks, scrub, nullahs and trees alternating. My gallant horse, seeing the pig, went stark staring mad took charge and carted us willy nilly with astonishing success. The Leader lost a curb chain and control and soon hit a tree and missed the hunt, luckless man. It was B——, on a new young horse that filled me with admiration. He stuck to his pig in that thick stuff in a way I could never have believed possible. Personally, after preventing one jink, I found myself riding too wide and presently lost the hunt. When we joined up at the end of the day I heard B——caught his pig and speared so well as to go right through into the ground where the spear broke. The pig then charged him and his young horse jumped the pig so suddenly as to unseat B——fortunately another spear arrived just in time.

Meanwhile, searching about now quite alone I caught sight of a long sounder, ambling off in the distance. Catching them up gradually, the leaders seemed well over minimum size and off we went as fast as my excitable mount could go.

For a couple of miles we went over terribly rough stuff, sometimes gaining, sometimes losing. The trees were the chief trouble with low hanging boughs. It was clear what an advantage the pig has in bad going. Finally reaching impassable jungle, it was useless to pursue and we had to give up. Horse and I made our way slowly back.

On getting back, I found another heat had also met this sounder and cut out a leading boar and accounted for him. So after all, we returned very contented, with a bag of three—good for those parts—and oh; what a marvellous thirst!

I rather felt I had hardly done my share of the day's work. However I hadn't fallen off and, obviously this sport required as much experience as any other, particularly over that going.

At least I returned very grateful to the Leader, infected with the germ of madness, and determined that my next move in India will be to a pig-sticking station, cost it what it may! The amazing thing about the whole day was that none of the horses came back lamed.

THE ORGANISATION OF SECOND AND THIRD LINE TRANSPORT IN INDIA.

BY CAPT. A. H. J. SNELLING, I.A.S.C.

A study of the Home organisation of second and third line transport does not present much difficulty. On turning, however, to the Indian establishments one finds very little in the various manuals that give a clear picture of the system in this country. It is therefore proposed in this article to review briefly the existing Indian organisation and then to compare it with that at Home with a view to ascertaining to what extent the latter would, or would not, meet conditions in India.

As a change over to the Home system has recently been foreshadowed in a certain training report* it is considered that it may be of advantage to officers to know some few of the considerations involved.

Provision on Mobilisation.

Before the question can be considered in detail the provision of both vehicles and men on mobilisation must be discussed. While this problem does exist at Home it is very small when compared with the difficulties in India. In the United Kingdom there are many lorries on the roads that are suitable for military work and these could be impressed in an emergency. Again the factories that manufacture these vehicles exist in peace and could, within a short time, begin delivery of suitable lorries on war being declared. These factories could also deal with any heavy repairs thereby dispensing with the need for maintaining expensive military repair shops in peace. There are also a vast number of garages, large and small, which could turn out a considerable number of fitters and technical workmen should the army require them. Many firms have their fleets of lorries, all efficiently maintained, which could be reduced in a national emergency and drivers so liberated would be available for the Service even if the lorries were not of the required type. In England many men have a smattering of mechanical knowledge and these could, with a little training, be turned rapidly into efficient drivers or, in some cases, mechanics.

* A. H. Q. India Training Memorandum No. 4 of 1932.

In India the situation is very different. Except perhaps those with the larger firms in cities like Bombay, Calcutta and Karachi, the ordinary civil lorry receives short shrift at the hands of its driver and very few would be fit to impress for army use. One or two motor firms have now erected assembly shops in this country but their output is very small compared with the requirements of an army and even these shops have to import most of the "parts" of the vehicles. The ordinary Indian garage mechanics are quite unfit for absorption in the Service without a long period of training. Most drivers are also inefficient, have no ideas of maintenance and are imbued with the idea that, being made of metal, the vehicle just goes on for ever provided petrol is poured into the tank. India can thus rely on very few lorries, mechanics or drivers being available immediately on mobilisation.

From these two different situations it is clear that, while at Home the peace organisation can be small and capable of rapid expansion, India must maintain, at considerable cost, nearly all her mobilisation requirements in peace. As a natural corollary it follows that India cannot possibly visualise or afford the lavish Home war establishments. In the British Isles all mechanical transport units are on a cadre basis or are to be raised on mobilisation but there is every likelihood that these establishments could be raised, and raised rapidly, when required. In India, whilst a certain amount of "watering down" of existing units by insufficiently trained personnel might be allowed for, expansion on any considerable scale, either in men or vehicles, is out of the question for a long period. Thus it must be borne in mind that the organisation of M. T. in India is governed by the fact that what she can afford in peace time is all that she will get in the early stages of a war and the problem is how best this quantity can be organised to meet situations which may face the Army in India.

The Indian System.

The second line transport allotted to various units is shewn under the headings of "baggage and stores," "supplies" and "tents" in the establishment of each unit. In the Division itself the transport is shewn as being supplied by two M. T. companies. The organisation of these two companies, as now appears in establishments, has recently been altered and is now the equivalent of twelve sections of 30-cwt. light lorries, organised in two companies, each section comprising 25 working lorries and 5 spares. This transport will usually consist of

eight 30-cwt. sections and two 3-ton sections but it might be any other proportion as could be made available. At present no third line transport is permanently organised to serve the Division. At Home such transport is provided by the Maintenance Company.

It may thus be said that there are in India at present no definitely organised transport units allotted to serve a Division. The system is for all second and third line transport to be allotted from a "pool" of all the M. T. available. The allotment and organisation is based on the standard section of 25 working lorries. These sections are either 30-cwt. or 3-ton lorries, the composite section having been abolished under the recent reorganisation.

Mobile Warfare.

Generally speaking the Indian system has been organised to ensure the most economical employment of the M. T. available. While none is permanently allotted to a formation it can be made available in the required numbers when necessary. The most obvious objection to this method is that, were an Indian Division required to go overseas for mobile warfare, it would be necessary to organise second and third line transport units on the Home or some such system. Military history shews that sudden extemporisation of this type nearly always leads to failure. The protagonist of the Home system can, quite rightly, point out that a "pool" is very easily formed by withdrawing Divisional and Corps transport units when the formations concerned are within a short distance of railhead. It is the work of transport units within the Division that requires training and specialised knowledge. Provided the transport has this training pool work, such as the carriage of road metal or the transfer of stores from a dock area to a base depot, is a simple matter. On the other hand units which are only trained for pool work will have considerable difficulty in carrying out duties, especially ammunition supply, within the Division.

There thus seems little doubt that the Home system is undoubtedly preferable to the "pool" in mobile operations.

Major Frontier Warfare Operations.

Few will disagree that the primary task which the Army in India has to face is operations on the Frontier. It is, therefore, now proposed to examine the two systems in the light of this problem.

For various reasons, which it is unnecessary to discuss here, major operations on the Frontier will not consist of a rapid advance to

any great depth. It is probable that a Division, or part of one, may advance some thirty miles in, say, three days. On completion of this distance the force will halt. Supplies and stores will then be brought up, dumps and reserves formed for a further movement, L. of C. marching posts built and stocked, roads constructed and reinforced and perhaps even a railway laid. The advancing force will thus be immobilised for some considerable period. It will have no need for a Baggage company and, possibly being in the same perimeter camp as the advanced supply depot, a Supply company will be superfluous. While it is a principle in mobile warfare that the second and third line ammunition must nearly always be "on wheels" such a necessity cannot arise in this situation. It will be possible to give warning several days before the force is to move on again and thus there is no objection to the ammunition being dumped within easy reach of the troops. The Ammunition company can thus also be liberated.

There thus appears little doubt that all second line transport can be withdrawn and utilised to assist the third line transport in convoy work. As units will be drawing supplies from a depot where stocks exist, as opposed to drawing through the normal S. R. P. where no stocks are maintained, the Maintenance company might not load with the specific stores required for the Division for one day. It is more likely to carry any commodities required to stock advanced depots. Thus the normal *raison d'être* of even this unit has ceased to exist. Here it should be noted that it may be some time before "as required" stocking of supplies can be resorted to. If it is allowed to begin too early and the L. of C. is cut, then the advanced depot may find itself with large quantities of bhoosa and none, perhaps, of flour. It is thus open to argument whether it will ever be possible to do other than send up so many days' complete rations by each delivery.

When, as above, convoy work only is required, it is suggested that it would be much simpler to have standard sections than to have three (Divisional)* companies of different load capacities, different types of vehicles and varying organisations with which to deal. This must be admitted, as also the fact that the organisation, with its three unit headquarters and consequently high overhead charges, is an expensive method when only convoy running is required. The organisation difficulty, while it may give extra work to the L. of C. authorities, can hardly be said to be a valid excuse for extemporisation as opposed to

* The Maintenance Company, being a Corps unit, is not part of a Division and though normally serving one Division, has not been included here.

organisation within the Division. Any extra expense during a stationary period is likely to be more than set off by the additional efficiency and liaison within the Division when it moves forward again. War is expensive in any case and possibly Mesopotamia has proved to India the danger of excessive parsimony. Even if the three company organisation be expensive for some given period, this should not be allowed to outweigh other considerations.

The conclusion, therefore, as regards this type of warfare is that, while the present "pool" system may be cheaper and easier to work during, perhaps, a considerable period of the operations, yet the Home system can carry out such work without difficulty. On the other hand, under the existing system, when the Division moves forward extemporisation of second line transport units from the "pool" of standard sections will be necessary. Thus, in the circumstances discussed, it would seem preferable to adopt the Home system.

Minor Frontier Operations.

It often happens that operations necessitating the employment of a smaller force than a Division have to be undertaken.

One of the chief reasons for the adoption of the existing system at Home was the realisation that supply, baggage and ammunition lorries would have entirely different functions to perform and that, on any given night, they would be scattered throughout the Divisional area. Thus baggage lorries might be with Brigades, supply lorries near S. R. P., while the ammunition lorries, some at F. A. P., might be anywhere where cover and accommodation permitted. Such a situation could not arise in the circumstances now to be considered as all lorries, except possibly supply vehicles, would have to be inside the perimeter camp with the Brigade. From this point of view there is thus no objection to the employment of a single company.

To discuss minor frontier operations, it is proposed to consider a mixed Brigade with the usual ancillary arms and services. Its actual composition need not be detailed here but it may be concluded that it requires M. T. as follows :—

	<i>Baggage. Supplies.</i>		<i>Ammn. Total.</i>	
For the Inf. Bde.	..	25 10	8	43
For attd. Div. Tps.	..	19 16	16	51
Total 30-cwt. light lorries			..	<u>94</u>

Under the "pool" system there is little difficulty. One company of four sections (100 working lorries) could be allotted complete. This would be a single self-contained unit with its workshop and headquarters.

With the Home organisation the situation from a transport point of view is much more complicated. Detachments from all three companies are involved and the lorries will be drawn from different sections of those three companies. No headquarters is available. Presumably the commander of one of the Brigade sections (supply or baggage) will command but he has no adequate staff. Again the detachments from the Divisional Troops sections will have to be attached to the corresponding Brigade sections. Some workshop organisation will have to be extemporised or detached from the headquarters of one of the companies. Actually this is not a great difficulty as companies can detach workshop units of one workshop lorry and suitable personnel up to maximum of four each.

Thus, where a mixed Brigade is concerned, the Home system would require to be broken up to some extent and extemporisation of headquarters, cooking arrangements, etc., would be necessary. The Indian standard section organisation would, however, meet the situation adequately and efficiently.

Transfer of Units between and within Divisions.

Under the Home organisation the attachment of Divisional Troops to a certain Brigade for a particular operation provides no transport difficulties. The Divisional order would state what such units are to be and supplies, etc., for them would be automatically diverted to the S. R. P. of that Brigade. Corps Troops attached to a Division would similarly be diverted from the Corps Transport Column to the Division concerned. Similarly if a Brigade of one Division was temporarily attached to another Division, the supply and baggage lorries would deliver automatically in the area of the augmented Division. In this last case the supply lorries for that Brigade in the supply section of the Maintenance company would be temporarily attached to the Maintenance company of the larger Division.

With the Indian "pool" system the matter is not so simple. The number and detail of lorries would have to be worked out each time by the C. I. A. S. C. and the two M. T. companies of the Division, or each of the Divisions, informed of all alterations to be made.

Lorries would have to be detached individually instead of one complete Brigade section being detailed. If third line were involved the H. Q. Army (Corps at Home) would also have to calculate and give detailed orders for the diversion of the necessary number of lorries from the M. T. companies carrying out such duties. Such calculations would inevitably cause delay and confusion and the Indian system cannot be said to be efficient in such circumstances.

Ammunition.

At present no fixed organisation exists in India for the delivery of ammunition beyond railhead. While it may be admitted, not without some reservations, that Supply and Baggage companies could be improvised, this is hardly so with ammunition. This commodity requires expert handling and a fairly complete knowledge of all the widely differing types of shell, their different fillings, the various kinds of fuzes and how all are packed and marked. The Home Ammunition company has attached to it 3 Officers and 27 Other Ranks of the R. A. and it might appear that these are for sorting duties. But further investigation will disclose that these are "located at the F. A. P." and that 21 of the Other Ranks, on motor cycles, are normally located with Artillery Brigade H. Qs., etc. For superintending the loading at A. R. P. there is one R. A. S. C. (not R. A.) Officer. Perhaps Ordnance personnel might be allotted to assist in this work. But even then they could not do everything, and it is doubtful if they and the I. A. S. C. Officer could do all the sorting and superintending in detail which is required. It thus seems essential that N. C. Os. and even Drivers of the Ammunition company should know something of the different types and packings of all ammunition in common use if loading is to be done expeditiously and efficiently. Inefficiency in loading may result in delay, or even worse, if shell of an incorrect filling is delivered at the gun. It is not generally realised that there are four different "packings" for S. A. A. excluding the "special for R. A. F." Again there are seven different types of shell for the 18 pdr. gun. These are all fused and special precautions are necessary with certain types of fuze. A further complication is the necessity, where possible, of delivering to any one Battery shells of the same "batch" of manufacture of the type required in order to produce level shooting. In addition there are the various shells, charges and fuzes of 4.5" and 3.7" hows. as well as the different explosives and pyrotechnics used in the Division.

There thus seems little doubt that the personnel charged with the carriage and delivery of ammunition should have at least a working knowledge of the different types with their "packings" and markings. The fact that no organised carrying unit exists as such in published establishments at the moment is a little disquieting. Possibly the fact that the "endless chain" system is under investigation at Home makes the authorities out here reluctant to introduce the Ammunition company in its present form with the possibility of a further reorganisation in the near future. However some form of Ammunition company appears essential. If the R. A. S. C. unit is adopted it would appear reasonable to introduce the Home second, and perhaps third, line organisation *in toto*.

As regards the actual carrying capacity of the Ammunition company in India. Recently the number of rounds to be carried in advance of railhead has been much reduced.

At railhead and at advanced base the number has been correspondingly increased. This presumably is due to the fact that the large quantity of rounds considered necessary to be at immediate call in ordinary mobile warfare would never be required on the Frontier. It is therefore suggested that the carrying capacity of an Indian Ammunition company need only be roughly 50 per cent. of the carrying capacity of the Home company. Should a Division be called upon to go overseas then the existing company could easily be diluted with the remaining 50 per cent. vehicles and that this would not adversely affect the efficiency of the whole unit.

Peace Training.

It is suggested that the peace training of M. T. in India is almost entirely neglected, except for its technical duties. For financial reasons all available M. T. is employed on "Carter, Patterson" work in the large cantonments. The fact that this absence of war training is tacitly approved of may possibly be due to the fact that the M. T. units themselves have no defined end to which to direct such training. If the Home system were introduced then every M. T. company would have its war duties automatically defined. A certain company would know that it was the Supply company of the 1st Division and it could train for its specific war duties. The Divisional Commander in peace would know that this unit was just as much a part of his war Division as was his Infantry. The probability is that he would then demand that the unit be given the time and opportunity for training. The

efficiency of such companies would be bound to improve once they felt that they formed part of a definite formation and were under a Commander who insisted on a high standard of training and who saw that time " off the road " was allotted for such work. Naturally, if I. A. S. C. training were brought under the D. M. T., as is the case with the R. A. S. C., the situation would be even better. The necessity for such training is especially conspicuous in the Divisional Ammunition Company which cannot be expected to function efficiently in war, as already explained, without a thorough peace training.

Whether it will be decided to include in the company the R. A. personnel as allotted to the Home unit is a matter for discussion. But, if they are to be so attached, then it is suggested that such personnel should do some training with the Ammunition company in peace. This would enable the R. A. and I. A. S. C. to understand each other's difficulties. As a result impossible demands on the carrying service would not be made and the I. A. S. C. would understand the difficulties, delays and dangers that might result from incorrect loading. As things are at present the Gunner must view the ammunition situation with some alarm. The introduction of an Ammunition company would go some way to allay this but would still not settle the question as to whether the company should be an R. A. or an I. A. S. C. unit to the satisfaction of the Gunner. But the attachment of R. A. Officers and men in peace time would go much further and would be bound to result in considerably increased confidence between the " user " and the carrying service.

General Conclusions and Provision.

There thus seems little doubt that some system on the lines of the Home second and third line transport is necessary in India. Only in minor Frontier operations does the Indian system appear the better and, as the whole force is likely to be an extemporisation, there would be little disadvantage in temporarily changing the M. T. organisation to meet the special situation. Owing to financial stringency it is manifestly out of the question to consider the provision of more lorries, even if it was considered otherwise advisable. It is therefore proposed to examine very roughly how far the vehicles now in the Service would go if the suggested organisation were adopted. As a basis of calculation only load carrying lorries are being considered, workshop and technical vehicles being excluded. Except in the Ammunition Company it is assumed that the loads to be carried are similar to those at

Home as far as weight goes. This would not be quite the case but, for purposes of comparison, it is not an unfair basis.

In every section of 30 lorries in India, 25 are working vehicles and 5 are spare. The percentage of spares to working lorries is thus 20 per cent. As most replacement lorries in this country have to be imported, it is necessary to maintain a higher percentage of spares than is required at Home. But, under the recent reorganisation, the Vehicle Reserve Depot is now definitely established. It holds as a reserve for I. A. S. C. units and as a general reserve some 99 medium 3-tonners and 200 odd light 30-cwt. lorries, all load carriers. In view of this it is suggested that a 10 per cent. reserve with units is sufficient during the present financial emergency and that we cannot afford more. When money is available the matter could be reconsidered. Thus, in considering what units could be formed, only 10 per cent. spare lorries, as at Home, have been allowed for.

There are now in India 11 M. T. carrying companies of different load capacities. These contain 11 headquarters, 960 30-cwt. lorries and 360 medium 3-tonners. A Baggage company and a Supply company require 109 and 134 light 30-cwt. lorries, respectively. An Ammunition company requires, as stated above, about 50 medium 3-ton lorries. A Maintenance company needs, on a reduced ammunition lift, some 121 medium 3-ton lorries. It would thus be possible to supply second line transport to either four Divisions or three Divisions and Army Troops (Corps Troops at Home), or any other suitable combination. In addition two Maintenance companies on a cadre scale with 70 medium 3-ton lorries each would be available. These figures give only a rough indication of actual requirements but they do shew that the introduction of the Home system is at least feasible and that, at the very worst, the first two or three Divisions can be completed while M. T. for the rest could be arranged on a cadre basis.

There is one serious objection to the above proposed distribution of the available lorry power. Some 80 per cent. of the available lorries have been allotted to second line transport and only about 20 per cent. to third line, thus making the organisation appear very top heavy. As has already been explained major Frontier operations entail a series of bounds and it is not possible for a force to move forward on its second bound until adequate stocks have been laid in at the post which marks the limit of the first bound. Thus, while the force is halted the greater part of its second line mechanical transport vehicles

can be withdrawn and employed as third line. Under these conditions of warfare in the early stages the force is unlikely to proceed beyond the radius of one echelon of transport (25 miles) from its railhead or advanced supply depot. When so withdrawn the second line will merely be required for convoy work which, it is suggested, requires little or no special training. At the same time, when supplies have been built up and the force is ready to move forward again, the specifically trained second line transport can be released for its proper specialist duties. Once again it is emphasised that trained second line transport can easily perform third line work whereas the converse is not the case.

As regards the other situations that have been discussed, that is to say minor Frontier operations or a force proceeding overseas. It is unlikely that more than one Division, if as much, would be employed on the former or, at the outset, more than two on the latter. Then the two cadre Maintenance companies would probably suffice but, if more third line was required, then the second line could be withdrawn from the 3rd and 4th Divisions and formed into Maintenance companies for the other two, the original Ammunition companies forming the Ammunition sections of the Maintenance companies. Admittedly this is extemporisation but it is a case of specially trained companies carrying out simpler duties than those for which they have been trained and not *vice-versa* as is visualised in the present "pool" system.

Again there may be a few lorries and trained drivers available from civil resources. As less training is required for convoy work than for second line duties these drivers could be formed into Maintenance companies and would then be ready for work much earlier than they would be if it were necessary to train them for second line duties.

It is therefore considered that the proposed organisation does possess sufficient "fluidity" to meet any situation that may arise while its efficiency, as compared with the existing system, is likely to be much greater.

The above does not take into consideration the somewhat lavish scale of technical personnel and drivers that are allowed for in existing Home establishments for reasons that have been given earlier in the article. Further economy is foreshadowed and some may fall on the M. T. If further cuts are necessary, a modification of the cadre system as exists at Home is at least likely to be considered in India.

With impressed or subsidised (if any) lorries the need for unit organisation for second line work is even more apparent than with a fully maintained company. Thus the necessity for economy itself seems to call for a Divisional M. T. organisation analogous to that which serves a British Division.

“ THE LION OF THE PUNJAB.”

Some extracts from the diary of Captain Lowe, of the 16th (Queen's) Lancers, describing the meeting between Lord Auckland, Governor-General, and Maharaja Runjeet Singh, at Ferozepore, November 1838.

—BY “ZARIF.”

* * * * *

The extremely interesting article, “An Historic Durbar,” by Colonel E. B. MAUNSELL in the April 1932 number of this Journal, has inspired the writer to present for comparison an account of the meeting between Lord Auckland, Governor-General, and Maharaja Runjeet Singh, at Ferozepore, in November, 1838. Extracts are taken from “The Diary of an Officer,” which was printed by Messrs. Thacker Spink & Co. of Calcutta, in 1894, ‘for private circulation only;’ a copy of which came into the hands of the writer as a present from an Indian friend, some years ago. The author of the diary is a Captain Lowe of the 16th (Queen's) Lancers, and the period which he covers in this one volume ranges from June the 16th, 1822, to June 16th, 1840.

The meeting referred to in this instance was on the occasion of the passing through the Maharaja's territory of the British Force, whose actions in Afghanistan culminated in the occupation of Kandahar on April 26th, 1839.

The majority of the names mentioned in this diary are blank, merely an initial being given; but the present writer has been able to fill in a number of these names where he has reason to believe them to be correct, and those names appear in full in the text given below; otherwise the text is unchanged, and given in full, save for the omission of a few irrelevant passages.

CAPTAIN LOWE'S DIARY.

November 28th, 1837.

Joined my Regiment (from leave) at Meerut, and shall now count the days till I obtain my leave to return to England.

1838. During the months of May and June rumours were afloat of the probability of a war with the Afghans, and of its being

the intention of our Government to depose Dost Mohamed from the throne of Cabul, and to re-establish the sovereignty of Shah Sujah, the rightful ruler, who has long been a pensioner of our Government, and who was for his misdeeds kicked out of Afghanistan by Dost Mohamed. It is also said the views of our Government extend to Herat, which we are to recapture, should it fall into the hands of the Persians, who, now aided by Russia, are besieging it.

In July it was supposed these extensive views had been abandoned, and I applied for leave of absence to England.

My leave was, however, refused with the intimation that the Commander-in-Chief thought it probable that I should not wish just now to be absent from my Regiment. So that we are to be employed on service seems certain, and I gladly abandon all thoughts of immediate return to England.

October 30th, 1838.

The probability of a campaign beyond our North-West Frontier had been for some months the general topic of conversation, but till the beginning of August it was not decidedly known, our Government had determined to march an army down the left bank of the Indus, while a force from Bombay would march up the right bank and meet us at Shikarpur.

After the free navigation of the Indus has been established, the united forces proceed through Kandahar to Cabul, depose Dost Mohamed from the Throne of Cabul and reinstate Shah Sujah.

It is supposed all this will be effected by the summer of 1839, and the force is to pass the hot weather in Guzni or some Highlands of Afghanistan. We are then to proceed to Herat (at a rough guess I suppose 2,000 miles from our territories) now besieged by the Persians, aided by Russia, and recapture the Fort for Kam Raan should it have fallen.

Kam Raan is, I believe, first cousin to our protégé Shah Sujah.

Such is the programme of our campaign, and in good truth if we accomplish all this we must not remain idle.

It will be well to take view of the characters of Dost Mohamed, who we style a usurper, and Shah Sujah, who, after thirty years consideration, our Government discover to have been an extremely ill-used potentate.

Sir A. B.——— and all European travellers who have visited his court speak of Dost Mohamed as a fine soldier of high character, governing his country mildly and beneficially for all classes, and well-disposed towards our Government.

One of the best actions of his life, undoubtedly, was kicking Shah Sujah for his many misdeeds out of Afghanistan.

Our protégé Shah Sujah is, we understand, universally despised as a coward and tyrant in the country he lost.

When he took refuge at Lahore he was treated with every indignity and humiliation by Runjeet Singh who plundered him remorselessly of the Koh-i-Nor, the supposed largest diamond in the world, and all the valuables in his possession, and who then allowed him to fly, a beggarly outcast, to our territories where since he has remained our pensioner.

Now, Runjeet is our good and trustworthy ally (?) in espousing the cause of the injured Shah (I have not heard whether he has restored or will give up the Koh-i-Nor), and is about to march a large force of Sikhs through Peshawar, and by the Kybur Pass attack Cabul on that frontier.

The policy of Government cannot be fathomed, and we can only surmise there must be some intelligence of Russia intriguing with Dost Mohamed for a passage of troops through Afghanistan for the invasion of Hindustan.

Meanwhile all we have to accomplish is talked of just as if we should have no further trouble than to order the Afghans to pluck their ripest fruit for us, and chastise them if they hesitate. I should say the Afghans are as fine a race of men as ever I saw, as muscular as Europeans, and they have the reputation of being brave and extraordinary fine horsemen.

There will be more work for us than is thought of.

On the 20th of October, 1838, after being inspected in marching order, the 16th Lancers encamped on the exercising ground of the Regiment preparatory to commencing their march. . . . to Ferozepoor, where they are to join the Bengal Divisions of the Army of the Indus.

On the 30th of October, at sunrise, the 16th Lancers commenced their march from Meerut to Ferozepoor, where the Bengal Divisions of the Bengal Army, the first commanded by Sir Willoughby Cotton,

the second by Major-General Duncan, are to be assembled and reviewed by Lord Auckland, Sir H. Fane, and Runjeet Singh, our ally of the Punjab.

The route we are ordered to take, increases the length of our march considerably ; and we hear we may expect difficulties in obtaining supplies ; and in the scarcity and brackishness of water at many stages ; that after quitting Dehlee there is no regular road ; and, in short, nothing can be more ill-judged than throwing these obstacles in the way of cavalry, who have such an endless march before them. Over and over again, we hear, all this has been urged to Sir H. Fane, but he only replies with a growl ; and the more he is asked to alter the route the more he won't ; so all we have to do is to make the best of it and overcome any difficulties that may present themselves.

* * * * *

On the 21st, at Rampoorah, official information arrived of the Persians having raised the siege and retreated from before Herat, this will have considerable influence on our proceedings ; and it is supposed our campaign will not now extend beyond Cabul.

At Kotkapoorah there is a strong little mud fort carrying guns, with a double ditch ; it belongs to Runjeet Singh and we were not allowed to enter the gates.

At Furreedkote there is a dilapidated brick fort with an endless number of bastions, the curtain presenting the impression of several shot presented in days of yore by Runjeet.

November 28th, 1838.

Marched into Ferozepoor and joined the Army of the Indus. I forgot to mention the 2nd Cavalry, under the command of Colonel D———, had accompanied us from Meerut, and Major Pew's Camel Battery from Dehlee ; Major Pew has the merit of having introduced the camel as a beast of draught into the artillery service, and his system has proved successful beyond expectation. Four camels are attached to each gun in strong and well-constructed harness, and in no instance was there any delay on the road ; there can be no doubt whatever of the camel being a better beast of draught than the bullock ; and in this country, unless where very rapid manœuvres are to be effected, I think superior to the horse. A driver is seated on each camel, the animal requires comparatively little care or breaking, and

thrives upon scanty food ; he walks along at the rate of nearly, if not quite, 4 miles an hour, and the team will trot away with a gun at 8 and keep this pace up for a distance if required.

It appears Sir H. Fane was quite right in not altering the route he laid down for us ; no difficulties of any kind presented themselves, and all through the protected Sikh States the road had been recently and well laid down ; through our own territories, from the Kurnaul road, no care or trouble appeared to have been taken by the overpaid civil functionaries.

Ferozepoor has only lately lapsed into the Company's possession and is about four miles east of the River Sutledje, the old brick fort is in ruins and could never have been a strong place. We have already encircled the town with a broad deep ditch and a well-constructed mud wall and bastions and, before long, I make no doubt this place will be strongly and regularly fortified ; in the town large brick store-houses have recently been erected, and it seems intended Ferozepoor should form an extensive mart for the merchandise brought up the Indus and the Sutledje. Against this, however, there is one great drawback, it is situated in so unhealthy a spot, the natives at one time of the year (after the rains, when the waters subside) are obliged to leave it.

A General Order promulgates, in consequence of the retreat of the Persians from Herat the aspect of our affairs to the North-Westward have so materially changed, that a smaller force is now deemed adequate to execute the views of Government, and, therefore, only the First Division under Sir Willoughby Cotton will proceed down the Indus, while the Second Division under Major-General Duncan will remain at this point, and form a *corps de reserve*.

The First Division under Sir Willoughby Cotton is composed of :—
Brigadier Arnold's Brigade :—

16th Lancers, 2nd and 3rd Regiments Native Cavalry, 4th
Local Horse, Captain Grant's Troop of Horse Artillery.

The Camel Battery, Major Pew.

The Siege Ordnance, Captain Garbetts.

Brigadier Sale's 1st Brigade Infantry :—

13th Light Infantry, 16th and 48th Regiments Native Infantry.

Major-General Nott's 2nd Brigade (subsequently Brigadier Denny's) :—

31st, 42nd and 43rd Regiments Native Infantry.

Brigadier Robert's Brigade :—

4th European Regiment, 35th and 37th Native Infantry.

Major-General Nott commands the three Brigades.

The Second Division under Major-General Duncan, remaining at Ferozepoor, consists of :—

Captain Alexander's Troop Horse Artillery.

The Artillery of the Park, Captain Sanders Skinner's Horse.

Brigadier Paul's 5th Brigade :—

The 5th, 20th, 53rd Regiments of Native Infantry.

Brigadier Dennis—3rd Brigade :—

3rd Buffs, 2nd and 27th Regiments Native Infantry.

Loud and deep are the execrations of the Buffs at being left behind !

Our encampment is semi-circular, and must extend four miles ; Lord Auckland's tents are pitched at the S.-W. extremity, the Commander-in-Chief's at the N.-W. Altogether about 13,500 troops are under canvas, independent of S——'s and S——'s Irregular Horse, amounting to 1,500 more ; while the camp-followers will be, I should say, full six times the number.

November 29th, 1838.

I was on escort duty with the right squadron at the tents of the Governor-General. Lord Auckland this morning held a durbar to receive Runjeet Singh, and to present him with two beautifully ornamented howitzers.

I was posted at the extremity of the line, a squadron of the 4th Native Lancers opposite.

After an hour's suspense the Sikhs were heard approaching from the Sutledje, and as they drew near Mr. T——, one of the Secretaries of the Governor-General, passed on a quick-running elephant and very accurately folded up in a military cloak. When he perceived Lord Auckland's line of elephants were advancing, and at such a distance as must ensure the meeting taking place at precisely the proper spot, Mr. T——stood up in the *howdah* and at arm's length flourished certainly the very largest cocked hat I ever saw ; it was deeply

fringed on the edges with white feathers, and must have been purchased from the Drum-Major of the Coldstream. He now put on the most determined expression of countenance, and resolutely waved his cocked hat for Runjeet and the Sikhs to advance.

Assuredly Mr. T—must have convinced himself that he was engaged in a most desperate enterprise, his manner and attitude precisely what you can imagine V——'s when he fell cheering on his men with "On, on, my lads, every bullet has its billet." What immensely important people Secretaries fancy themselves!

I could not leave my Squadron and therefore only saw the meeting between Lord Auckland and Runjeet on their elephants; and being at open order and my horse very unsteady, it was as much as I could prevent being driven away or crushed.

Runjeet was very plainly dressed in crimson muslin, with a turban of the same; he wore no ornaments, the only mark to distinguish him was the yellow 'chattah' (umbrella) carried over him. In the Durbar tent I heard the two howitzers were drawn up, and a pile of shrapnel shot disposed between them. The tent was so dark and crowded that Lord Auckland and Sir H. Fane who were dandying about little Runjeet, as you may fancy two giants exhibiting themselves with a dwarf between them, in a booth at a country fair, did not perceive the shot, and they proved such trustless conductors that Runjeet pitched over the shot and almost alighted on his nose on the other side of them. The Maharaja will consider this a bad omen for his new treaty with us. Since then Runjeet has discovered the guns are flawed and asked for others.

The crowd in the tent was now beyond bearing, and the bandmaster, who must be a wag, played "We met 'twas in a crowd," and this was by far the best thing that transpired at the visit of the Lion of the Punjab to the Governor-General of India. There never was, I believe, so silly a conversation recorded, as the public observations of these mighty potentates.

On returning from the Durbar, Runjeet stopped at the flank of the troops lining the road and had Major Pews' Camel Battery paraded for his inspection, and he seemed much pleased with it.

Several of Runjeet's parade horses were drawn up opposite my squadron; they were all large fat northern horses, and appeared very highly broke; they were most sumptuously caparisoned.

November 30th, 1838.

Lord Auckland visited Runjeet's camp on the Western bank of the Sutledje, where he has assembled about 40,000 of his troops ; our Regiment and the 2nd Cavalry formed the escort, and having crossed the Sutledje on a bridge of boats, formed a street from the bridge towards the Sikh Camp. The Sutledje is here a clear rapid river, about the breadth of the Severn at Gloucester.

Lord Auckland, who is generally very punctual, soon made his appearance, and as soon as he passed, I followed his retinue.

About two hundred yards on our right rested the left of Runjeet's Regular Cavalry ; four numerically strong Regiments, tawdrily dressed in scarlet, and miserably mounted on under-sized ill-conditional horses, now lined the road and to do them justice were immovably steady, for I don't think they could have concentrated a kick. (There are some European officers in this branch of the service and amongst them Mr. F——, who I remember passing through Cawnpore as an adventurer). On the right of the Cavalry rose a sandbank sufficiently high to obstruct all view except of the Zambureks, who were posted on its summit and fired a salute from their camels as Lord Auckland passed. This termination of the view was most judicious. Having ascended the sand-bank an entire new scene developed itself. A broad street now appeared formed of the Regular Infantry drawn up three deep "*à la Francaise*" on one side, and two deep on the other ; these troops wore scarlet cloth jackets, generally faced with yellow, red turbans, and white trowsers : their arms the musket and bayonet, the belts black leather. I have never seen so tall a body of men collected together, or so steady, standing under arms. This street extended nearly, if not quite, half a mile, and the view was now terminated by the Maharaja's line of superbly caparisoned elephants drawn up in front of the arch leading to the Durbar tents. As Lord Auckland appeared, Runjeet advanced in the centre of his line of elephants, each line moving with the exactest regularity till the meeting took place in the centre of the Infantry. The '*Salaam*' having been made, Runjeet stepped from his own into Lord Auckland's '*howduh*,' and after embracing, proceeded on the same elephant through the arch to the Durbar.

Here a guard superbly dressed in yellow silk (the favourite colour of the Sikhs) some of these in curious and delicate chain armour, and

all most sumptuously armed, were stationed to prevent intrusion. There was some little difficulty in persuading this magnificent guard to allow us ingress; at length, however, this was permitted, and I found myself in a square of about four acres artificially laid out as a garden with shrubs and flowers, which must have been brought from a considerable distance; this space was enclosed with canvas walls seven feet high and in it were collected the body-guard, all armed with sword and matchlock, the stock curiously inlaid with gold, or silver, or ivory; these troops were dressed in kincob, a thick and costly manufacture of silk, wrought with gold thread in various rich patterns—the appointments and belts worked in gold on scarlet cloth, as rich as embroidery could make them.

On arriving at the Durbar tents, formed of the choicest fabric of Cashmeer, worked in most beautiful patterns and gorgeous colours, I perceived Runjeet seated between Lord Auckland and Sir H. Fane; there was no mistaking him from the loss of his left eye; yet, notwithstanding this, the expression of his countenance is remarkably acute and intelligent—I may perhaps observe, restless.

The Lion of the Punjab was by far the plainest attired man in his court; he wore the same dress he appeared in when he visited Lord Auckland, of dark crimson and turban of the same colour, and he had not decked himself in any of the jewelry of immense value which he has in his possession. I was disappointed in not getting a glimpse of the Koh-i-Nor, which he generally exhibits on his person on great occasions. I fear Shah Sujah has little chance of ever recovering this inestimable diamond—who knows in a few years in whose possession it may be found; Shah Sujah's ancestors plundered it from the treasure of Nadir Shah after he was assassinated, and Nadir extorted it from the Great Mogul after the massacre at Dehli.

Runjeet is a little man but not emaciated, as I had been led to expect, from debauchery; he is dark for a Sikh, and has not the usual hooked nose of the Sect; his face rather full and his beard long and white. Those of the Sikh Court who were admitted to the Durbar were most superbly dressed, some in flowing yellow or bright red silk dresses their 'kummerbunds' always a Cashmeer shawl of very great value, some in highly polished cuirasses, and others in choice and glittering armour, and all appeared decked in jewels of immense price.

I should mention Runjeet has wrested Cashmeer from the rule of Cabul, and will perhaps restore the Unequaled Valley to Shah Sujah

with the Koh-i-Nor ; however, at the Sikh Court, under a tent formed as it were of immense shawls, seemed to be collected the very choicest fabrics of that heavenly country ; whilst all that superb armour, jewels of inestimable value, silks of the richest manufacture, ornaments of pure and elaborately wrought gold, shawls of the finest texture and most beautifully worked colours and patterns, and embroidery curiously worked on cloth or velvet, here met the eye.

Even those in the retinue who were far too inferior to gain admittance to the Durbar wore shawls of such beauty as would have excited the envy of our richest ladies.

Immediately in front of the Maharajah and Lord Auckland the never failing 'nautch' was exhibiting, the singer was covered in jewels, and wore a dark green dress, very tastefully embroidered in silver, and she modulated her voice sufficiently not to make herself very disagreeable.

The presents were now handed round and we took our leave.

I rode down both lines of the Sikh Infantry : I think I mentioned I never saw so tall a body of men collected. I don't think there was one man under six feet in the front rank, and many appeared six feet four inches, and even more than that.

I think one of the standard bearers must have been close on seven feet ; but these giants in height wanted breadth and muscle. Several of the officers were magnificently dressed, and I observed more than one whose epaulettes were formed of pearls.

Runjeet has several Europeans, both English and French, in his service ; he devotes almost his whole attention to the Artillery and Infantry, which accounts for the inferiority of the Regular Cavalry.

December 1st.—The whole force under Sir H. Fane was out to rehearse a grand field day for Lord Auckland and Runjeet : 10,000 men of all arms were on the ground. We supported the guns on the right of the line, and had little to do but sit on our horses and endeavour to see through the dust what was going forward. We made one charge over some ground, dotted with small wells, which threw our advance sadly out.

December 2nd.—The Regiment was seen by Sir Willoughby Cotton, who went through his inspection as quickly as possible.

December 3rd.—A grand review for Lord Auckland and Runjeet, the same number of troops were on the ground, as at the rehearsal.

The troops worked with the greatest precision, and the marching past of the Buffs elicited unqualified approbation.

Everything went off very well, and even Sir H. Fane was, we understood, pleased.

December 4th.—Runjeet had a review of his troops which I did not attend ; but I hear the Sikhs worked very well and steadily."

* * * * *

This account of a meeting between Runjeet and the Governor-General just seven years after the meeting described by Colonel Skinner in Colonel Maunsell's article provides at least one interesting comparison.

To borrow from Colonel Maunsell's article :—

"The Maharaja was dressed very richly with jewels and wore on his left arm the famous diamond called the Khoe Noore." Seven years later at an almost exactly similar function we read : "The Lion of the Punjab was by far the plainest attired man in his Court, he had not decked himself in any of the jewelry of immense value which he has in his possession. I was disappointed at not getting a glimpse of the Koh-i-Noor."

It is to be wondered whether Runjeet had outgrown his taste for personal decoration or whether the change was due to a tactful desire not to draw too much attention to the source from which much of this "jewelry of immense value" had been obtained.

On the 10th of December, the First Division left Ferozepore and began its march up to Kandahar, with what result History has already told us. Captain Lowe accompanied this force with his Regiment, but the incidents recorded in his diary are not concerned with Runjeet Singh, the Lion of the Punjab, any further.

A MATRIMONIAL TANGLE (OR MOUNTAINS AND MACHINE GUNS).

BY "AUSPEX."

An action has been brought for the dissolution of the union solemnised during the Great War between the Rifleman (ex-King) and a young lady, a nouveau riche, who, by virtue of the marriage, now styles herself the Queen of all Battlefields. The plaintiff is the Rifleman and the grounds are alleged coercion and misrepresentation, followed by neglect and desertion. The plaintiff sought to show that the conditions of the marriage had been unbearable to him, particularly when his business had compelled the couple to reside on the Frontier of India away from the social diversions and distractions of civilisation.

The costs, which had already been paid by the Rifleman, were unfortunately not recoverable.

The address of the plaintiff's counsel is given verbatim and ran as follows:—

Description of the neighbourhood. Its disadvantages and advantages.

1. The disadvantages of ground with which we have to contend on the Frontier are:—

The cover from view and fire for the enemy, given by rocks and bushes. This gives him a great measure of immunity and makes it extremely difficult for us to pick up a target.

The rocky ground, which makes it difficult to see the strike of bullets and so to observe or to range properly.

The lack of roads and tracks by which we can move our transport and heavier weapons. This limits the scope of our action and puts us at the severe disadvantage of moving this transport and these weapons by the few roads and paths that there are, thus enabling our opponent to predetermine our direction of movement and to prepare his positions for, and to lay his weapons on to, one or two definite routes up which we must move.

The command which the ground gives him.

Its Advantages.

2. But there are, paradoxically many advantages for us, born, in many cases, of these very disadvantages.

The most important is the lack of paths and tracks and the lack of obstacles insuperable to the movement of men of rifle companies. This enables us to move almost at will from one point to another, provided that we leave our transport and heavier weapons behind. The great expanse of barren and unwatched country makes it almost certain, as long as we march on no known track or road, that we will reach our objective undetected and unopposed and so have the initial advantage of surprise. We can achieve this provided that our original movement from camp or place of concentration is properly concealed. This is worth some trouble as the advance is almost always more important than the actual conduct of the battle, for a good, concealed approach that brings with it the benefits of surprise may make a battle a very simple affair for us.

The cover from view and fire is again a great advantage if we will only allow ourselves to make use of it. The tribesman is assisted in his use of cover by the fact that he can, once he has predetermined our movements on tracks and roads and to protect ourselves on these tracks and roads, take cover from a known direction and make full use of it to oppose us. If our movements are not from a known direction, a great deal of the disadvantage to ourselves disappears. We may, in fact, if we know the enemy's concentrations, be able to make use of this cover to turn the tables on him as he leaves his villages or bivouacs.

Their Rustic Neighbours.

3. As the enemy may be supposed to make what is, for his purposes, the best use of ground, then we should, up to a point, imitate him and surpass him in his own methods. His method of obtaining possession of commanding ground is to make for that ground by a detour or by arriving there some time before we can arrive there. Very occasionally he obtains this high ground by a skilful surprise attack on our picquets.

But his tactics are almost always qualified by his desire to achieve what he wants without undue risk to his person and by the fact that, being unorganised, he cannot for long hold what he has gained. Throughout, he nearly always has the initiative, owing to his knowledge of the ground about our road, to his lack of hampering weapons and

supplies and to the fact that we are never there to molest his advance and to make it a slow progress, undertaken with great care and step by step. By seeking for surprise, while we are unable to get surprise by allowing ourselves to be tied to our column, he keeps the initiative. It is, however, less likely that his knowledge of the ground will help him so much over country seldom trodden by human beings, away from villages and tracks, as it does about the few routes that exist and that he treads daily in his search for a livelihood. But in the hills we may expect to be on more even terms with him.

The Social Whirl.

4. We still make the killing of the enemy the first object in our tactics and, if that object can be achieved sufficiently often and completely, it is undoubtedly the most effective. In order to get at one's enemy one must so place oneself as to obtain a suitable target at which to hit. That usually means, in this country, that one must be above him. The Pathan has no great wish to sacrifice his life so he will not ordinarily stay for very long after the tables are turned on him. Hitherto, we have placed great reliance on the bullet or shell fired from below, from the road, path or nullah, for the inflicting of casualties. This is a promiscuous method of trying to kill which seldom yields any great results because the enemy is at liberty to go when he pleases. We must, therefore, restrict this liberty and can only do this by "hoisting him on his own petard;" by mobility and surprise to place him so that he cannot easily get away from us.

Against his mobility and knowledge of the ground, we place our superior firepower. It is questionable how far our better organisation confers a further advantage on us. In part, if we gain surprise, it must benefit us and in one way in particular. Once his loose organisation is broken, it becomes for him a matter of each man for himself and he cannot put up any co-ordinated resistance owing to his lack of methods of communication. At such a time we can put up an organised offensive if we make use of our simplest and quickest means of communication, but very seldom if we use our more complex forms. If, in attempting surprise, we should in our turn be surprised, our habits of cohesion stand us in good stead.

Effect of the terrain on the lady's mobility.

5. Looking at a typical piece of Frontier country, one soon concludes that riflemen can get over it without great difficulty and that

pack animals can only traverse it by carefully selected detours after excellent reconnaissance. If, then, we are to move over the hills, avoiding the tracks, we conclude that usually our pack animals cannot go with us. That is, we will have to leave behind us our Vickers and Lewis gun mules, our reserve ammunition and other pack-carried equipment. Without these mules we have with us rifles and manhandled Lewis guns. Troops that are physically fit can manhandle Lewis guns over great distances for a limited operation, though their mobility will suffer thereby. We are then at least on equal terms with our enemy except for his better knowledge of the ground, possibly his keener sight and, assuredly, our better marksmanship.

This last asset is an important one, for it is our habit to contend that the tribesman is a superlative shot and thereby to infer that he is a better shot than our own men. This cannot be true for he has but a limited supply of ammunition with which to practice and lacks proper means of caring for his weapons, while our men are carefully trained in the use of the rifle, have a large supply of ammunition and have experts to keep their arms in good condition. If, by chance, it were true that the tribesman is a better shot, then the whole of our weapon training is at fault as far as the rifle is concerned. It is naturally to be regretted that there is a tendency to reduce the number of rounds that the rifleman may use in a year.

However, even the advantage that better marksmanship may confer upon us is not sufficient. We need a further advantage and that must be the advantage of surprise.

6. Trained troops can carry their Lewis guns over considerable distances along with a proportion of ammunition. This is not so with the Vickers gun and it is a very serious disadvantage for it means that only by stepping these guns painfully and carefully forward—and that is a slow process—can we get any use from their fire. The question is whether, in the ordinary way, attempting a surprise operation, this slow process is worth the fire effect that we can expect from the weapon. To answer this it is necessary to examine the probable fire effect that we may in reality rely upon, allowing the guns all the ammunition they require—an unlikely condition for a prolonged offensive action.

To begin with the probable target to be offered. In hill country and with an enemy who is adept at taking cover, the target is well

concealed and hard to pick up at over 500 yards ; it is also a scattered one. To keep the guns at even 500 yards from the leading rifleman is nearly always impossible owing to the slowness engendered by constantly moving the guns and to their vulnerability and need for command for firing over the forward troops.

Next, the matter of getting the range. Inaccuracies due to the man at the range-finding instrument, the hard use to which the instrument is subjected, the conditions of battle and lack of good marks on which to range, all tend to throw the bullets clean off the mark. As the guns are usually firing at a crest line or against a steep hill, this inaccuracy is seldom offset by the width or depth of the beaten zone. The target is usually fleeting, so that there is little time to range by fire even if the strike could readily be observed ; it is not often that strike can be seen at over 800 yards and then only the strike of an occasional bullet.

It is therefore more than risky to base an offensive on the neutralising or destructive effect of machine gun fire. It is no good to argue that the fire will have a great moral effect for this effect is problematical, varying and indeterminate.

Then the difficulty of fire direction and "recognition." Where it is so hard to select reference points and to pick up targets, it is, even under peace conditions, a matter of great uncertainty that the gunners will get on to the correct targets.

From all this one has to deduce that the guns can usually only operate against an area in which an enemy is expected to be. This must mean a great waste of ammunition and a small chance of killing. With the eight guns in an Indian infantry battalion, the minute size of the bullet and the sparseness of the spray of the bullets over an area, there is no great chance of even neutralising an enemy's fire except at short ranges, where accurate fire on to an obvious target can be obtained.

The immobility and vulnerability of the guns must again be emphasised. They are, in withdrawal, by a long way the first to go and their going is a matter of anxiety until they are out of harm's way.

Demoralising Effect on the Plaintiff.

7. It is the machine gun and our conventional columns that are tying us down to the use, or rather abuse, of continually fighting and moving along Frontier tracks and roads. We are for ever fighting for

ground—for a reasonable command—to get protection for our columns, instead of being free to concentrate on outwitting our enemy by movement in any direction of our, and not his, choosing. We are thus forced back more and more on the unreliable and wasteful firepower of these weapons and on entrusting to them the task of putting our riflemen on to their objectives. This is having a disastrous effect on the training of the rifleman, both in his use of his weapon and in the use he makes of the ground. He moves to the attack over ground that he can only just, most painfully slowly climb, and on which he cannot, after supporting weapons have ceased their fire, get forward with his own weapons or collect to deliver a strong and speedy assault. There is a lack of realism and of true comprehension of the actual conditions of a fight under these circumstances, resulting in a lack of confidence by the man both in his rifle and in his ability to get himself to his enemy with its aid and with the aid given him by the ground. If this process continues it will lead to his complete demoralisation.

Examples of misrepresentation by the Defendant.

8. Without doubt the prevalent conception of mountain warfare has been that of the much-encumbered column moving along a road, probably in the nullah bed, throwing out piquets as it goes and so clawing itself forward as a cat claws its way up a tree.

In the precis of a lecture at one of our instructional establishments, this remark occurs. (The lecture deals with warfare on the North-West Frontier.)

“ Battle is, as a rule, only a fight to secure, maintain or evacuate piquet positions. Defence, etc. . . . ”

Frontier fighting is no different in essentials from any other form of fighting except that it is modified and exaggerated in some respects by the conditions peculiar to the country and the enemy. We cannot take as our pattern the fighting in Waziristan in 1919-20, undertaken as it was largely by untrained or partially-trained troops. It is, however, remarkable that the Official History of those operations shows more than once the success of a movement undertaken in an unexpected direction perhaps by night, and the casualties of the succeeding withdrawal in an obvious destination by day. Machine guns could not well have participated in these operations by night and their withdrawal by day would have been a nightmare.

In a precis of another lecture from the same establishment, not, admittedly, dealing with frontier warfare, there is this remark.

"The task of the attacking Commander. To get his troops across the ground swept by the fire of the defender's weapons. He cannot, therefore, attack with more men than he can effectively cover with fire."

If this is all there is in the Commander's task, then the idea of manœuvre is deader than ever, and the infantryman is still there to be fed to the lions, still there for a Roman holiday.

Capital Sentence not applied for.

9. We cannot, at present, do away with the machine gun for we have no substitute for it and, even on mules or in limbers, it has proved its use abundantly as a defensive weapon in suitable country and under suitable conditions, but we must realise that its uses in attack and withdrawal are confined to those occasions when we cannot get surprise by movement and have to rely on a slow-moving, staged attack, or on surprise by volume of fire in the few cases when this opportunity offers; and to those occasions when the guns can be sited beforehand to form a strong pivot on which to withdraw.

The Plaintiff's Future.

10. This future is likely to be a very much longer one than that of the mule-borne machine gun.

There seems to be every chance that the rifleman will now be trained as an expert, if it is only in order to save his own skin, and that he will once more be given a higher status on the battlefield. One very much hopes that, while the methods of training, lightening and improving him are under consideration, his rifle will be given a careful examination with a view to substituting for it a light sporting rifle sighted up to 1,000 or 1,200 yards, with a "V" backsight and, perhaps, a smaller bore. Perhaps a separate weapon might be found as useful as the bayonet.

The Defendant's Future.

11. It is possible that the evolution of the rifleman may lead to separation from his machine guns and that these weapons, if they do not evolve at the same pace, will, instead of queening it within the unit, once more be herded into bevvies of royalty in machine gun companies.

Finally.

12. The rifleman's motto must be, "Use your brains to save your legs and your legs to save your skin." With greater skill, quicker movement and more confidence, he can instil the fear of God into his enemy and so avoid the humility of being continually pushed uphill at him.

ESCAPE FROM DELHI, 1857.

BY "SAMEJ."

I.—Introduction.

On Sunday, the 10th May, some troopers at Meerut, who had refused to take the new cartridges, were sentenced by Court Martial to different periods of imprisonment. Their comrades, after releasing them and killing some of the officers there, and committing outrages on helpless women (in which they were joined by the people in the Suddar Bazaar), left Meerut for Delhi the same evening which place they entered about 8-30 a.m. on Monday morning, the 11th.

The bungalows on the Jumna Canal were first burnt by them and the officers of the Telegraph Office killed.

On entering the city, they met Captain——of the Palace Guard and the Commissioner and killed them. After this it is not certain how they proceeded. Some say they divided into parties; one party entered the Palace and then went to Dusruao Gunge and after burning all the houses there and murdering the European men and women whom they met, joined the other party which had gone towards the Cashmere Gate, and had killed on their way families of the——and——; also the Chaplain and his party. They were attacking the offices of the Quarter Guard, when the N. I. entered the Cashmere Gate; and on the Commanding Officer, Colonel R.——, ordering his men to fire on the mutineers, they turned round and killed him and the other officers, and secured the guns which had gone over with them. Here they remained some time firing into the Quarter Guard on the officers on Guard and others who had taken refuge there.

It is said that one trooper was killed by Captain——of the N. I. before he fell by the hands of his own men. From this they proceeded to the Bank and killed Mr.——and his family; and then the Delhi Gazette Press, which they burnt.

I was informed about 10 a.m., that all this had taken place by one of my chaprasis who had come in breathless from the City. I had heard the firing for some time, and had seen the N. I. marching in, but of course concluded that some slight outbreak had taken place in the City, which was being quelled by a high hand.

Some of my men, however, told me that the disturbance was a serious one—which I did not believe till a note and carriage was sent over by Captain———for us to go to his house.

II.—Narrative.

I had reluctantly gone to the Kutchery on the 11th May, as I was not feeling well : and this made me return earlier than usual. Had I gone to the City as I generally did of a morning to inspect some disputed place and as I had intended to do that morning to look after some work a carpenter was doing for me, I should certainly have shared the fate of so many other Europeans. I got home at 8 a.m. and was lying on the couch when Nurput (my bearer), reported that all the masons and coolies who were engaged in building our new rooms had bolted ; and shots were heard in the direction of the Cashmere Gate.

I ordered my horse with the intention of going to see what the row was, as I thought it must be some slight disturbance ; but, before the horse came, the N. I. was seen marching towards the City—the sepoys shouting vehemently.

Soon after the firing increased and cannon shots were heard. I was deliberating what to do, when a man whom I had not seen before, came breathless and said the Europeans in the City had all been killed by some troopers from Meerut. I cross questioned him ; he said he had seen the Killedar Sahib lying in a ditch ; the Barra Sahib had also been killed ; the Collector Sahib had been attacked ; that he did not wait but ran along the road, and on passing the Cashmere Gate he saw 3 or 4 “goras” lying there dead—and advised me to save myself.

Shots were now heard in every part of the City, and occasional volleys of musketry.

Even then I thought the N. I. having arrived at the City had quelled any disturbance on the spot, but when one of my chaprasis told me that the sepoys had turned against us and killed their own officers and had sworn that they would not leave alive any European in the place, I began to think more seriously of the outbreak. At this time a carriage came from Captain N.———for Eliza, asking her to come over and keep Mrs. H.———company, who was alone at his house. The baby had just gone to sleep, but Eliza said she would not go without her. I therefore put both into the

carriage and told her I would fetch Miss S——who might not perhaps be aware of the disturbance, and meet her at Captain N.'s house.

I got into my buggy and fetched Miss S——the doctor said he would remain there. We drove over Hindoo Roy's hill and came into Cantonments, and went first to the Brigadier's bungalow, and then to Captain N.'s house, but Eliza was at neither place, and our enquiries about her were useless.

The houses seemed empty; the servants would hardly reply to our questions, and the people in the Suddar Bazaar were standing in groups—well armed detachments of sepoy were marching hither and thither.

My anxieties had increased. We drove to every place we would think of in this confusion. At last we met an officer who said several carriages had gone to the Sergeant's house. When we got there, we could get no information, but saw several carriages going along the parade ground. On driving up to them, I found Eliza and Mrs. H.——in one carriage crying, and other ladies who were in great distress. I told the former to be calm—that everything would soon be right—but on consulting Captain N——, he said matters were very serious, that none of the sepoy could be relied on and he wished to take us to a place of safety, and we had better go to the Flagstaff, where others had taken refuge. We had now been out for upwards of one hour, and the heat was excessive. On arriving at the Flagstaff, we found the room nearly crowded with ladies and children; and the Brigadier and some officers consulting outside. It was agreed that the place should be put into a state of defence; muskets were loaded and piled upon the upper storey, and water and provisions ordered in the hope that relief would soon be coming from Meerut, which was not more than 35 miles from Delhi, but we soon saw the folly of expecting any help.

The heat was fearful and the confusion increasing—the ladies were sometimes ordered up, and then down again.

The alarm that we were about to be attacked was given several times by the sepoy standing around us, and parties of men were seen moving about the hill. An explosion was now heard and a column of smoke rose up to the skies and soon after enveloped the City in a cloud. There was no mistake that the magazine had blown up.

We spoke to the sepoys and asked if they would do their duty and stand by us should they be required, and this question was repeated with promises of presents and advancement; but I shall not forget the fiendish expression of their countenances. One man called out to the others in a loud voice what we said, but before they could reply, he added "Yes, we will fight against our enemies, but not against our friends." This was enough—we knew their mind. It was only a wonder that they continued passive.

The whole City was now in a cloud—the Bank in flames on one side and the Press on the other. Colonel R———was brought in badly wounded and covered with blood, and then a cart load of the bodies of the officers killed in the City with the dresses of ladies thrown over them. The sight was most distressing and sickening. I knew not why the corpses were brought to us—except as a taunt to show us how much we were in their power, to be sacrificed at their pleasure. The cart was pushed by two sepoys, who, when it came near the Flagstaff, gave it a shove and left it. There was a grin on the countenances of those standing round—such a fiendish grin as I shall never forget.

Everybody's attention was now attracted on hearing a rumbling noise, and soon after, seeing the guns which had gone to the City in the morning with the N. I. making their way to Cantonments, Captain De T———mounted his horse and rode up to them within 50 yards and ordered them back (not knowing they were in possession of the enemy), but a volley was fired at him, when he turned back. His horse staggered and we thought he would have fallen. Other shots were fired but the horse, though shot through the head and rump, got up to the Flagstaff and Captain De T———covered with blood, (but not touched) got off. The horse soon after rolled over. The guns were then levelled at us and I expected to be blown to bits, but they soon turned them away, and after securing the magazine in the Cantonments cantered back to the Cashmere Gate.

Our state, which was always dangerous, was now becoming really precarious, but a special Providence watched over us. It was indeed a miracle that we were spared. We were told the troopers, who had committed all the outrages in the City, were refreshing themselves in the Subzee Mundee and would soon be on us. It was madness to remain where we were.

The Brigadier was consulted—he said, “My advice is to remain here, but you may do as you like.”

On this a general rush was made to the conveyances standing around. Captain N——very kindly called out to us “Take my carriage”—into which we went, and almost all left the Flagstaff at the same time. The sepoy turned into their lines, but the two guns went with us as far as the Cantonment gardens, and then refused to go any further. We passed them, and C——who was on one, called out if we would take him up. Mrs. P——and her two daughters, with another lady, were running along the road. I told them to get into our buggy,—our carriage being full—as we had previously taken up a poor sergeant’s wife and her child—the husband having been killed.

Dr. N——was lying on the road wounded, and Mrs. N——standing by him. The rush of carriages was now very great. I had made up my mind to go to Umballa, but all drove for some 6 or 8 miles on the Kurnaul Road (we left Delhi at 6 o’clock in the evening) from where De T——and a few others turned off to Meerut. There was a great dread of the troopers following us—the only hope being that they were tired and glutted with blood and loot in the City to go any further. The road was covered with large bodies of men, and on one occasion they tried to stop us but thought better of it.

After a wearisome drive of some 40 to 50 miles, we arrived at a Dak Bungalow. It was, however, not thought safe to remain there long. The horses were dead beat—it was impossible to take them on further. There were besides ourselves a great many ladies who were anxious to go on (Mrs. P——, 3 Misses B——, Mrs. A——and two children, Miss N——who had lost her brother, Mrs. P——and two daughters, Mrs. H——Miss H——, and Mrs. T——and two children). I promised to do my best to get them on, and on hearing a bugle sound, I went to the road where a Government conveyance with parcels was going to Delhi, but the driver would not hear of my detaining him and I was determined he should not go on. As persuasion was of no avail, I pulled him down and with a sound box on the ear brought him to terms. The parcels were thrown out on the road. In this way, two other carriages belonging to private companies were secured and the ladies as comfortably stowed away as circumstances would permit. We

drove on, finding changes of horses on the road—as we were a large party and carried a high hand (the police sowars being also turned out to accompany us), we got into Kurnaul between 10 and 11 a.m.

The news of the fall of Delhi having previously been spread by an officer who had preceded us—we were hospitably received in Mr. Mc-W's house and received every assistance and kindness from the Assistant Collector. The heat, excitement, and fatigues of the travelling, added to the anxiety of the previous day, had very much done up the ladies, but it was admirable the way they bore it all. The sepoy on the Treasure Guard could not be trusted, and after refreshing ourselves we were determined to push on, and with some difficulty procured carriages. We started from Kurnaul at about 7 or 8 p.m., and arrived at Thanasur between 12 and 1 a.m. We put up at a friend's and the ladies having had no rest or sleep since our flight, had gone to sleep on the floor.

At 3 a.m., we were roused by the servants with the news that some sowars had surrounded the Deputy Commissioner's house. We concluded at once that they had come from Delhi to cut us up and of course were in a great fix what to do, and really thought though we had escaped so far, there was no hope left for us and we must be lost. I consulted with my friend and the ladies were directly roused up, and taken into the fields and ditches to hide, and there they remained for nearly two hours.

We heard the tramp of horses and voices of natives laughing and talking. Our suspense during this time was very great and it was only at daybreak that we ascertained that some troopers had been sent to Thanasur to escort the Treasure away as the guards of sepoy could not be relied on, and had shown signs of disaffection. This was indeed a great relief to us and it appeared even a more miraculous escape than from the Flagstaff at Delhi.

From Thanasur we proceeded in a parcel gharree in which all the party was stowed away, packed close, and 30 coolies engaged to push the vehicle. The roads were dreadful but we managed to reach Umballa at about 8 a.m., quite worn out.

We were very hospitably received by the—who got us a small house, but there was no rest for us even here. We were taken away to the lines of the 9th Lancers as soon as it was evening, as there was a report that the—and— N. I. Regiments were

going to rise and murder the residents. In this confusion and uncertainty we remained for more than a month. Our daks were several times laid for Simla, but as often countermanded, as we were told the Ghoorkhas had mutined and murdered the inhabitants of Simla ; but when the report was proved incorrect, we went up to Kussoolie and there remained.

LETTERS TO THE EDITOR.

RECONNAISSANCE.

SIR,

In European countries reconnaissance is almost always undertaken to find out something about the enemy, but, when we come to conduct operations, whether real or training, in countries that are not so well mapped and in which roads are comparatively few, there arises the need for information about the ways and means of moving from point to point.

Aircraft are becoming more and more expert at finding the enemy, who, like ourselves, is growing an alarmingly large M. T. tail that can't be hidden.

Distant reconnaissance the book says is an Armoured Car job (and may possibly become a Light Tank job when improvements are introduced).

The problem that faces the Commander and most particularly the mechanized Cavalry Brigade Commander is whether a certain route is feasible, firstly for light tanks, and secondly, for six-wheeler M. T.

He may be able to get this information by using his Light Tanks or Armoured Cars, if he has any, but it is far more likely that he will have to rely on Cavalry reconnaissances.

The whole situation as regards flanking or turning movements by mobile forces has changed; generally speaking whatever surprise is to be gained by any such movement is possible only as the result of a march from dusk till dawn the next morning. To send Armoured Cars or Light Tanks to reconnoitre on the afternoon before a night march may give away the Commander's intention and they may not be available or may want the time for overhaul and rest. Incidentally comparatively small obstacles hold up reconnaissances of this kind which have no means of improving crossings over nalas, etc.

Cavalry, most likely have been on the move and are at the end of a long and tiring day. Patrols have got to go out at speed and to come back at speed, for, on their information, the Commander bases his plans and without it his move may be a pure gamble.

There is a limit to the pace and endurance of Cavalry horses but, as matters stand at present, we send out our patrols in full marching kit, which must reduce their chances of getting through and nearly double the time taken. The Navy and the Air Force maintain special light craft capable of the highest speeds so as to escape by pace rather than fighting.

If we take the example of the hunting field, not to mention the race course, the greatest attention is paid to reducing weight on the horse to a minimum.

The answer lies in having certain officers and men specially trained in getting over country at speed—their horses must be specially selected and should be led and not ridden till they start on special patrols. They should have light hunting saddles and snaffle bridles and their riders should carry only an automatic pistol and a light haversack.

Very considerable training of the rider is necessary to teach him how to nurse his horse on long distance rides or endurance tests if you prefer the latter term and, of course, very special training of the horse is necessary. Ignorance often means the riding of a horse to death in any attempt to cover upwards of 30 miles at 8 miles per hour or faster.

It is reasonable to suggest that the first people to welcome the idea of "Speed patrols" would be those interested in horse breeding in India—the satisfaction of seeing your brand on the horses of speed patrols ought to be at least equal to that of seeing it on the winners of a 3 furlong race. Carefully worked out speed patrolling contests would provide a welcome change from the annual tent-pegging competitions, which, to say the least of it, are difficult to justify in the light of our various manuals on horsemanship. Classes for teams of speed patrol horses might be introduced into our premier horse show even at the cost of excluding four in hand teams and coaching marathons, which we all like to see but for which it is not easy to produce any convincing arguments.

If a precedent for speed patrols is required, we have only to refer to the British Officers in the Peninsular war who, mounted on blood hunters, brought in information for the British Armies.

Yours faithfully,

"LUMBIDUM."

MECHANIZATION.

SIR,

There has been some correspondence lately in Service and other journals about the lack of progress in mechanization of the Army, and in particular, about the demonstration of a post-war Division on the march, held in the U.K. a year or two ago. The criticisms were generally to the effect that, in spite of partial mechanization of certain components of the Division, the formation as a whole, was longer and more unwieldy than its predecessor of pre-war days. There is much point in these remarks but it seems that many of the critics have missed the main point, which is that if the Division is to be more mobile, it must be smaller. The whole tendency of modern thought is for increase of speed and reduction of man-power by increased use of mechanical devices. It seems, therefore, that the time may have come to adopt the continental system of Brigades of 3 Battalions. The reduction of the 4th Battalion in each Brigade would automatically bring about a reduction of the ancillary services within the Division, thus bringing about a considerable reduction in the length of the columns and an increase in flexibility and mobility.

2. It is not suggested that there should be any further reduction in the actual number of Battalions noted for Defence Services, but that existing Battalions would be more suitably organized in a slightly larger number of Divisions, each Division being smaller. With the reduced number of Battalions in a Brigade, it would be advisable to allot sufficient extra mechanical transport to the Division to allow of a portion of the Infantry being made really mobile.

3. A further point which has been adversely commented on is the inclusion of a Cavalry Regiment as Divisional Troops. The inclusion of this unit has, it is said, tended to overload the Division and its ancillary services without any real compensating advantage. The trend of modern opinion and especially those who have been privileged to observe the recent Sino-Japanese operations in Manchuria, is that Cavalry should be organised in large formations, acting boldly and rapidly in advance of or on the flanks of the main bodies of Corps, in co-operation with armoured units and aircraft. It is thought that the Divisional Cavalry could be largely reduced if not entirely abolished, and the units thus set free, used to form additional Cavalry Brigades.

4. In view of the proposed demonstrations in the Northern Command next winter, it is thought that the question of the most suitable organization for a Division under modern conditions, will be very much in the foreground during the next year or two.

Yours faithfully,
"HORSEMAN."

GROUND TROOPS.

SIR,

As an ancient member of the Institution of at least twenty-five years' standing, I crave your indulgence. I have not the pen of a ready writer. I confess that once, many years ago, I did submit an article for consideration to one of your distinguished predecessors. It was returned with the usual polite expressions of regret. You will realise, then, that only the strongest feelings can have impelled me to write to you to-day.

The April number of the Journal contains the usual able "Editorial" in which, under the heading of "Frontier Unrest" occur the words "ground troops and irregulars."

"Ground troops"! Slugs! Blind worms! I do not know who was responsible for the introduction of this detestable expression. I wish I did. You may ask what is wrong with the term. It is hard to give a definite answer to this question, but let me assure you that to me and to many other simple soldiers it conveys a veiled expression of contempt.

Shades of Marlborough, Wellington, Roberts and a hundred more! who are we that we should be thus labelled?

There are sea forces, land forces and air forces. You do not speak of "water troops" or "air troops." Why, then, "ground troops"? Ships are ships, troops are troops and aircraft are aircraft.

I ask you, of your goodness, to erase this horrible phrase from your vocabulary.

Yours faithfully,
"EARTHWORM."

[We admit the horrible impeachment, and hasten to offer our apologies for such a catastrophic slip of the Editorial pen, at the same time we can hardly agree that the use of the term "ground troops" implies a feeling of contempt.—ED.]

FRANCE.

Release from the Colours of the 1st half of the 1931 Class.

The 1st half of the 1931 Class of conscripts will be released from Colour service on 31st March, 1933, instead of 15th April. Soldiers thus due for transfer to the reserve will be shown on leave without pay until 15th April, from which date their reserve service (*disponibilité*) will count.

Auxiliaries (soldiers unfit for general service who are employed as orderlies, batmen, &c.) will not be liberated on 31st March, but will be retained with the Colours for a period of three weeks, which period will count as one of the periods of training which they are liable to carry out during their *disponibilité* and reserve service.

Appointment of Under-Secretary of State for War.

By a Decree dated 18th December, 1932, Monsieur Guy de Chambre has been appointed *Sous-Secrétaire d'Etat* at the *Ministère de la Guerre*.

This Under-Secretaryship was allowed to lapse on the formation of the second Laval Ministry at the end of January, 1932. When Monsieur Tarden formed his Cabinet in February and introduced a Ministry of National Defence, the Minister, Monsieur Piétri, was given two Under-Secretaries. On the fall of this Government in May, Monsieur Herriot, who reappointed the three separate Ministers for War, Marine and War, did not appoint an Under-Secretary of State for War.

In a recently published statement, the duties of the Under-Secretary of State for War are stated to be as follows:—

Article 1. He will assist, and if necessary act for, the War Minister in the consideration of any questions which the latter may pass to him for opinion or decision. In the latter case the full powers of the Minister are delegated to him.

Article 2. The main object of his post is to study the possibilities of economy in the administration of the various departments and services.

Article 3. Questions relative to pay, cost of movements, supplies, clothing, bedding, hygiene, the comfort and health of the troops, fall more particularly within his functions. In fact any decree affecting the above will come to him for approval before being submitted to the War Minister for signature.

Article 4. He will study the question of the creation of a special department dealing with the manufacture of arms, and of a Corps of Military Engineers, as well as possible measures for the reorganization of the *Service des Poudres*.

Article 5. In addition, the Minister for War may delegate him to speak in either House on subjects concerning the War Department.

Military Appointments.

Under Presidential Decrees dated 7th January *Général de Division* Weygand is confirmed in his appointments as Vice-President of the *Conseil Supérieur de la Guerre* and Inspector-General of the Army for the year 1933.

General Gamelin, Chief of Staff, and all the other members of the *Conseil Supérieur de la Guerre*, are similarly confirmed in their appointments for 1933.

General Baratier, *Chef de la Section Militaire d'Etudes des Traités*, has been placed on the Reserve with effect from 11th December, 1932. He is succeeded by Colonel J. Mollard.

Appointments to the Higher Command and Staff in the Air Force.

General Hergault, member of the *Conseil Supérieur de la Guerre*, Inspector-General of the Air Force and Chief of the Staff of the Air Force, has relinquished these two appointments in the Air Force on the appointment of an Air Force General Officer to these appointments.

General Barés, member of the *Conseil Supérieur de l'Air*, has been appointed Inspector-General of the Air Force and Chief of the Air Staff *vice* General Hergault.

General Amengaud, member of the *Conseil Supérieur de l'Air*, and Assistant Chief of the Air Staff, has been appointed Assistant Inspector-General of the Air Force.

General Denain, member of the *Conseil Supérieur de l'Air*, has been appointed Assistant Chief of the Air Force.

Army Reorganization.

Details of the new reorganization of the infantry divisions stationed near the frontier fortifications have been recently announced.

(a) Fortified Regions.

There will be two fortified area commands (*Régions Fortifiées*), i.e. :—

(i) Metz.

(ii) The Lauter.

In addition there will be three Rhine fortified sectors (*secteurs fortifiés du Rhin*). The fortified area commanders will have under their command all the infantry, artillery and engineer units detailed for the permanent occupation and defence of the fortified works in their respective areas.

The infantry units which are to form part of the permanent garrisons of these fortified areas are to be taken from the four divisions (11th, 12th, 42nd and 43rd) at present stationed in the 6th and 20th regions, and will consist of the four infantry regiments (23rd, 146th, 153rd and 168th) which are to be transformed into regiments of the *Type Région Fortifiée*, and one regiment (170th) of those which are to be transformed into *Type Mixte* regiments. This reorganization involves practically no movement of troops.

As a consequence of the above measures, the four infantry divisions concerned will be reduced to two infantry regiments each, instead of the normal three, which they all have at present, except the 43rd Division, which has four regiments. In other words the 11th, 12th and 42nd Divisions are to be reduced from nine battalions to six battalions each and the 43rd Division from twelve battalions to seven battalions.

(N.B.—The 43rd Division is to include one *Type Mixte* regiment, the 158th, of four battalions.)

It is announced that the groups of fortified area horse drawn artillery will be organized into one regiment consisting of eight batteries of light and four batteries of heavy guns, and one group consisting of four batteries of light and two batteries of heavy guns. It is also stated that the five regiments of foot artillery are to have increased establishments and will consist of a varying number of batteries—seven to twelve. These five regiments are to be mechanized.

(b) *Mechanization.*

The artillery of the 15th Division is to be mechanized, for which purpose credits have been asked for in the 1933 Estimates.

(c) *Foreign Legion (Infantry Units).*

A decree dated 1st February, 1933, lays down new establishments for the infantry units of the Foreign Legion. The principal features of this decree are—

- (i) The 5th Regiment (stationed in Indo-China) will have three instead of four battalions.
- (ii) The establishment of each infantry regiment of the Foreign Legion will be 80 officers, 2,924 other ranks, an increase of 2 officers and 24 other ranks.
- (iii) The establishment of the French *cadre* is now laid down, *i.e.*, 100 per regiment.
- (iv) A depot is formed for the five regiments, the establishment of which will be 50 officers and 4,246 other ranks.
- (v) Motor companies will take the place of mounted companies, except in the case of certain regiments as decided by the War Minister.

(d) *Colonies.*

Certain changes are contemplated in the organization of the troops in the Colonies :—

- (i) *Indo-China.*—The autonomous Tong Brigade will be transformed into a division.

A battalion will (as noted above), be withdrawn from the 5th Regiment of the Foreign Legion.

- (ii) *West Indies.*—A machine-gun company and a battalion headquarters are to be created at Martinique. The reasons given for this are :—

To enable the natives to receive their military training under the recruiting law (although for reasons of economy they will only receive 6 months training instead of the usual 12 months).

To make a start with the organization of the naval station at Fort-de-France.

(N.B.—This naval station has not been in use since 1924 when it was sold.)

- (iii) *Pacific*.—The detachment at Tahiti is to become a company.
- (iv) *French Somaliland*.—The creation of a company of *tirailleurs indigenes* at Djibouti.

This port of call has hitherto possessed no military defensive organization. The Colonial Department considers that the time has come when a military organization should be given to this base which forms an important strategical link.

For reasons of economy it will not be possible to carry this out before 1st January, 1934, but token credits have been asked for in this year's estimates.

The native police forces in French Somaliland are to be reorganized into a native militia, which however, in peace remains a police organization under the civil authorities.

The organization and establishment of this militia will be as follows :—

Commander : A captain of Colonial infantry.

A foot "brigade" :

Europeans—1 subaltern officer.

5 warrant officers and non-commissioned officers.

Natives—180 other ranks.

A camel troop :

Europeans—2 warrant officers and non-commissioned officers.

Natives—50 other ranks.

On mobilization the militia will be placed entirely at the disposal of the military authorities. The mobilization of the militia will be authorized by the Governor after consultation with the O. C. Troops.

INDO-CHINA.

Pacification.

The Headquarters of the French forces in Indo-China have issued a statement on the work of peaceful penetration which has been carried out in the central plateau of South Indo-China.

In December, 1931, the Governor-General, acting on military advice, drew up a plan for the occupation of the central plateau on the

borders of Cambodia, Cochin-China and Annam. The task was entrusted to two companies. The first company of Annamite Mountain Light Infantry set out from Ban-Me-Thuot in a south-westerly direction and after a difficult advance through almost impenetrable forest made a strong post at Buon Djeng Drom in the heart of the unsubdued area from which the work of pacification and reconnaissance was carried out. By the end of the year over 60 villages, the existence of which had been unknown, submitted to authority.

Meanwhile the second company of Cambodian Light Infantry marching eastwards reached its advance base at Shrektum in February and there, with the aid of penal labour, made a road through an extremely unhealthy region of dense forest. At the end of six months they had advanced 40 kilometres and reached the Plateau des Herbes. It was decided after a reconnaissance carried out in October to make a permanent base 80 kilometres from Shrektum, which it is hoped the Annamite company will also shortly reach.

The authorities are very well satisfied at the peaceful manner and the short time in which the occupation has been carried out. It will be consolidated by building roads, establishing medical posts and by making local heads of tribes responsible for minor administration.

Repatriation of Indo-Chinese-Malgache troops.

In pursuance of the policy by which the number of Indo-Chinese-Malgache troops serving in France is to be greatly reduced, Annamite and Tonkinese troops are being steadily repatriated.

Promotions and Appointments.

General Bidon has taken over the command of the Cochin China-Cambodia Division, *vice* General Vallier.

General Thiry, it is said, will take over the supreme command of the Indo-China Group when General Billottee returns to France early in 1933. General Thiry at present commands the Annam-Tonkin Division.

ALGERIA.

Tour by Governor-General.

M. Carde, the Governor-General of Algeria, has been making an official tour by air through the Southern Territories. M. Carde left Algiers on the morning of 4th March in a military aeroplane escorted

by four other machines carrying his personal staff, and covered the 1,320 miles from Algiers *via* Biskra to Janet in 14 flying hours.

The Italian officer in charge of the Southern Territories of Tripolitania came from Ghat to Janet to greet the Governor-General by order of Marshal Badoglio, the Governor of Tripolitania, acting on instructions from Signor Mussolini. Franco-Italian courtesies were exchanged at an official banquet at Janet on 7th March.

BELGIUM.

Gendarmerie.

The press announces that the budget for the *Gendarmerie* for 1933 shows a reduction of 12,000,000 francs as compared with the budget for 1932. There is, however, one new item of importance, a sum of 410,000 francs for the installation of a permanent special system of wireless communication in the *Gendarmerie*.

Change in organization in the Ministry of National Defence.

It has been decided to do away with the Directorate of Military Personnel and Recruitment in the Ministry of National Defence, and to create a bureau in the General Staff to perform its functions. Colonel Colpin, who has been commanding the Regiment of *Carabiniers* in Brussels, will be at the head of this bureau. At the same time a new General Inspectorate of Recruiting and External Services (*Bureau de recrutement et des services extérieurs*) is being created, and Lieut. General Maton, the late Director-General of Personnel and Recruitment, has been appointed Inspector-General.

Appointments.

Lieut.-General Swagers, the present Commandant of the Staff College, is to be replaced in June by Major-General Tasnier, the present *chef-de-cabinet* of the Minister of National Defence. Major-General Tasnier is to be attached to the Staff College almost at once, and is being replaced in his present functions by Colonel Duvivier, who is at present commanding the Air Defence Regiment in Brussels.

Non-commissioned officers statute.

The Minister of National Defence has submitted a *project de loi* to the Chamber with the object of reforming the statute under which professional non-commissioned officers serve in the army, with the object of giving them an assured position up to the age limit. The

basis of the new statute is similar to that which governs the conditions of service of commissioned officers. Non-commissioned officers will only come under the statute when they have been admitted to the *cadre* of non-commissioned officers which can only take place after a certain period of service during which they have given proof of efficiency and goodwill. Vacancies in the *cadre* are published quarterly in all units and may be applied for by non-commissioned officers and are filled, other conditions being equal, by seniority. A non-commissioned officer may forfeit his membership of the *cadre* for the following reasons :—

- (i) Loss of Belgian nationality.
- (ii) Retirement in the normal way.
- (iii) Public manifestation of opinions hostile to the Constitutional Monarchy, to the fundamental institutions of the State, to the liberties guaranteed by the Constitution, or for offences against the person of the King.
- (iv) Having been condemned to a criminal award or to a sentence of imprisonment for certain offences.
- (v) Deprivation of rank as a result of a military award.

The linguistic question in the army.

An Army Order has recently been published on this subject with the object of reducing the penalties of failure to pass the language examinations required for commissions. Henceforward any cadet of the Military College who fails to pass the examination in French or Flemish may present himself for re-examination in this subject only after a lapse, of not less than 3 months and not more than 12 months. In case of success he receives his commission immediately after the examination. While waiting for the new examination the cadet is sent either to the School of Application, to the school of his arm, or to his future unit in the rank of *adjutant*. In the event of failure to pass the second examination he is posted to his unit in the rank of *adjutant*. The same conditions will apply to candidates for commissions through the ranks.

Cadet schools.

The Minister of National Defence proposes as a measure of economy to suppress the elementary cadet schools which cater for the education of boys from ten to twelve years of age, who can, it is considered, perfectly well be educated in the ordinary State schools. There is no

question of abolishing the secondary or higher grade cadet schools. It is, however, probable that the Flemish section of the higher grade school now situated at Namur will be moved to Flanders.

Army Strength.

A *Project de loi* fixing the contingent for 1933 at 61,500 men was recently passed by the Chamber of Representatives. The numbers are made up as follows:—

Volunteers and re-engaged men	..	23,000
Recruits of the Annual Class	..	34,200
Reservists called up for training	..	4,300
Total	..	61,500

The total figure, 61,500, shows a diminution of 1,500 men as compared with 1932. The Government stated that the major portion of this reduction has been achieved by the suppression of certain employments occupied by re-engaged men.

Financial situation.

The *project de loi* submitted to the Chamber by the Government to deal with the financial situation of the country and to institute the necessary economies has been voted by the Chamber. It includes certain amendments to the recruiting law. In future, conscripts serving over 8 months will receive an indemnity of 200 francs a month for the extra period of their service instead of 400 francs a month as heretofore. Married conscripts will in future receive an allowance of 100 francs a week during the period of their reservist training instead of 150 francs a week as in the past. The Minister of National Defence is authorised, however, to carry forward to 1933 the credits which remain from the sum of 210,000,000 francs which was voted in 1931 for fortification purposes. About 60,000,000 francs still remain unspent.

Inter-Ministerial Commission.

In the opinion of the Government, certain incidents during the strike of July last have shown the necessity of establishing a constant liaison between the three Departments of the Interior, Justice, and National Defence, with a view to the maintenance of order in the country. With this object it has been decided to create an inter-ministerial commission which will have the duty of studying the problem of the maintenance of order and deciding the measures which shall be taken to prevent a repetition of the errors committed in July.

ITALY.

The calling up of conscripts in 1933.

Instructions have recently been issued for the calling to the colours of this year's conscript class. As in former years, the class is divided into four main categories corresponding to the various periods of service—18 months, 12 months, 6 months and 3 months—to which conscripts may be liable. The normal period is 18 months but, provided that a conscript has passed his courses of "pre-military" training he may, for various family reasons, be allowed to serve for a reduced period.

The rules which govern the various kinds of "family situations" are lengthy and somewhat complicated. There are, for instance, 15 different "situations" which normally entitle conscripts to serve for a reduced period of 6 months, provided that they possess the requisite "pre-military" qualification. This reduction is, however, by no means automatic and the Minister of War is empowered to cause conscripts "collectively to pass from one category of liability of service to another." Thus, this year, conscripts belonging to 7 of the 15 categories are being excused all military training, whilst the greater part of the remainder are being held to serve for 12 months instead of 6. Conscripts who, for family reasons, are nominally liable to only 3 months service are, as usual, not actually being called to the colours.

Conscripts are enrolled at different times of the year according to the length of service to which they are liable. Those liable to serve for the full period of 18 months or for a reduced period of 6 months join their units in March. Those liable to serve for 12 months are called up in the autumn. The total strength of the annual class normally available for service in the army is approximately 250,000, of whom some 200,000 join the colours, whilst the remaining 50,000 obtain total exemption.

Promotion of Officers.

The question of blocks in promotion has for some time been exercising the attention of the Italian military authorities, and has, more than once, been ventilated in the Chamber and Senate. A special law has now been promulgated which is designed to deal with this problem.

There are two main blocks. The first consists of some 2,500 infantry captains commissioned in 1916, or earlier, and quickly

promoted to their present rank. The other is in the list of lieutenants, and includes those who were commissioned from the Reserve in 1921 with ante-dates according to war service.

Under the new law accelerated promotion is to be given to selected officers who are successful in passing certain tests or examinations, whilst a number will be absorbed by being seconded for special appointment in connection with mobilization, store-keeping and record duties. Special terms are also offered to a certain number of officers who, during the next 5 years, may elect to accept transfer to the half-pay list with a view to subsequent retirement. Provision is also made for the removal from the Active List of officers who are definitely not being considered for promotion. The law, in addition, makes special provision for dealing with promotion difficulties in the Carabinieri, and raises the age limit for the final retirement of those war disabled officers who are employed in government offices.

Protection of the civilian population against air attack.

For some time past the Italian Government has shown a keen interest in the question of the protection of the civilian population against air attack, and recently a law has been published which is intended to ensure that all tunnels constructed in urban districts shall be suitable for use as shelters against aerial bombardment.

It is laid down that in important towns or in their vicinity, newly constructed tunnels for roads, tramways, underground railways, ordinary railways, &c., must be fit for use as permanent shelters in case of air raids. In order to fulfil this purpose, they must comply with certain conditions specified in the law relating to depth, strength of roof, number of entrances, ventilation, lighting, &c. In the event of non-compliance with these regulations the offender will be liable to a fine varying from a minimum of 5,000 lire to a maximum equivalent to double the cost of the work executed. Responsibility for bringing the offender to justice will lie with the "Central Inter-Ministerial Organ for air protection of the national territory."

Apart from the fact that this is the first legislation of its kind, interest attaches to the reference to the "Central Inter-Ministerial Organ." This is presumably a Committee created to assist the Minister of War in discharging the responsibilities for passive air defence which were transferred to him last year from the Ministry of the Interior by decision of the Supreme Council of Defence.

Pre-military training in the Colonies.

Under a recent decree pre-military training has now been made compulsory in the Italian Colonies. The system is apparently to be similar to that in force in the mother country which provides for the training, under the direction of the Minister of War of all youths between the ages of 18 and 21 by means of two annual courses each of about 20 lessons.

In Lybia responsibility for the training is allocated to the 1st and 2nd Lybian Legions of the Fascist Militia and in Eritrea and Italian Somaliland to the autonomous cohorts of the Fascist Militia stationed in those colonies. As a temporary measure it is laid down that the young men of the 1912 class will only attend one annual course.

JAPAN.*Patriotic contributions to the Army.*

On 26th January, 1933, the Tokyo "Nichi-Nichi" reported that public monetary donations to the army for national defence had reached a total of Yen 6,764,779 (roughly £676,000 at par). The following were some of the items purchased with this money :—

- 63 aeroplanes.
- 27 A. A. guns.
- 27 A. A. machine guns.
- 7 observation cars.
- 9 searchlights.
- 32 audiophones.
- 1 tank.
- 3 armoured cars.
- 1 tractor.
- 9 motor trucks.
- 4 infantry guns.
- 3 motors.
- 23 heavy machine guns.
- 137 light machine guns.
- 32 bullet proof vests.
- 190 gas masks.
- 29,600 steel helmets.

In addition to specific subscriptions for the above material, numerous other voluntary contributions are being made to supplement army funds. For example, officers' wives, through a form of savings associations have contributed a sum of Yen 33,000; school children are encouraged in many instances to make small daily savings and the sum collected by this means is used to swell the funds raised for various patriotic motives. A further example of the constant and intensive patriotic propaganda that is being carried out, is provided by the action of the entire staff of the Osaka arsenal who worked one Sunday, which is normally a holiday, and gave their day's earnings of over Yen 10,000 to the "State Defence Fund of the Army."

Army Estimates.

According to the Japanese Press, the Cabinet has given approval to draft estimates for the financial year 1933-34 amounting to Yen 2,233,000,000 (£223,800,000 at par), which, incidentally, is the highest figure in the history of Japan. Of this total, approximately Yen 900,000,000, or 40 per cent., is, apparently, to be raised by loans. The estimated expenditure on the Army is Yen 447,883,000, and on the Navy Yen 372,606,000; together these sums amount to 37 per cent. of the whole. These estimates have to receive the sanction of the Diet before they become effective.

PORTUGAL.*Chief of General Staff.*

General Eduardo Marques, who was Minister for the Colonies in the Portuguese Cabinet in 1930, has been appointed Chief of the General Staff of the Portuguese Army. This appointment became vacant on the death of General Ivens Ferraz on 16th January, 1933.

Peninsula War Memorial.

A monument commemorative of the Peninsula War was unveiled at Lisbon on Sunday, 8th January, 1933. The decision to erect this memorial dates from the centenary celebrations of 24 years ago, but the completion of it has been delayed by various causes, among others the Great War, and then by what was judged to be the prior claim to commemoration of that cataclysm, to which a monument was inaugurated last year.

The new memorial stands in the main avenue of Lisbon. It takes the form of a high *stele*, surrounded by stone figures, life-like and allegorical, including a British lion, and surmounted by a bronze eagle about to take flight, symbolic, no doubt, of the expulsion of the armies of Imperial France.

The programme was such as is usual on these occasions. It was carried out with commendable punctuality and order, and was followed by a march past of representative units of the garrison of Lisbon. The troops were well turned out, and had the serviceable appearance which marks the Portuguese Army.

At the conclusion of the ceremony, the President of the Republic spoke to the British Minister gratefully of the participation of the British Army in the Peninsula War, and especially of the services of Wellington and Beresford.

Recruiting laws.

By a decree dated 22nd November, 1932, the Portuguese Recruiting Laws have been amended as follows:—

(a) Duration of active service.

In normal circumstances the duration of service in the ranks will be 17 months. Of this period the first 5 months will be devoted to general instruction and the elementary instruction of specialists. The remaining 12 months will be devoted to completing the instruction of specialists and to the professional instruction of the permanent cadres.

In exceptional circumstances, when the financial situation of the country so demands, the period of 5 months, referred to above, for general instruction, may be reduced by the Minister for War to 3 months.

(b) Incorporation of Recruits.

In future there will be two incorporations annually in all arms and services. The first will take place between 1st-5th May; these recruits concluding their first 5 months by 30th September. The second incorporation will be from 1st-5th November, the recruits finishing their first period by 30th March in the following year.

The two incorporations, as far as possible, will consist of an equal number of recruits.

The first incorporation in 1933 took place from 1st-5th April, an exception being made in this instance only.

(c) *Discharge.*

Normally the discharge of recruits of the first and second incorporations in any year will take place respectively as follows: 1st-5th October, and 1st-5th April.

Anti-aircraft battery.

The arrival at Lisbon is announced of the first anti-aircraft battery for the Portuguese Army, purchased from Messrs. Vickers Armstrong.

It is further stated that the contract for a second battery, exactly similar to the first, is shortly to be signed with the same British firm.

Thus a first anti-aircraft group will be formed, with probable headquarters at Cascais.

Other anti-aircraft material is to be acquired for the Coast Artillery School, for training purposes.

Conversion of rifles.

The *Diario da Manhã* announces that contract will shortly be signed between the Portuguese Government and the firm of Steyr Solothurn Waffen, of Zurich, for the conversion of all the rifles at present in use in the Portuguese Army.

Obituary.

General Arthur Ivens Ferraz, D.S.O., died on 16th January at Lisbon. General Ferraz was successively Chief of Staff, Chief Liaison Officer, and Commander-in-Chief of the Portuguese Corps in France during the Great War. From 1919 to 1922 he was Portuguese Military Attaché in London, holding later the same appointment at Washington. In 1928 he became Colonial Minister in Portugal, whilst in the following year he became Prime Minister. He subsequently held appointments as Administrator-General and Chief of Staff of the Portuguese Army. The funeral took place on 18th January with full military honours.

SPAIN.

Strength of the Army in Spain.

The *Gaceta de Madrid* of 1st January, 1933, contained the text of a law fixing for 1933 the strength in other ranks of the Army in Spain at 145,000. This law annulled the decree of 8th September, 1932,

which gave the figure as 151,000, and also provided further that "the Minister of War shall proceed to examine the question of a future reduction of the period of service in the ranks."

Strength of the Army in Morocco.

A Circular Order of 26th December, 1932, fixed the establishments of the Army in Morocco for 1933. The total figures given were :—

Officers.	Other ranks.
1,509	36,897

Co-ordination of Air Services.

In the Budgetary Law published on 29th December, the President of the Council of Ministers was authorized to organize the National Air Service by the co-ordination of the three branches—War, Marine and Interior.

Communist outbreak.

On 29th December, following an accidental explosion which led to the discovery of a bomb factory and arms store in Barcelona, the organization of a widespread revolutionary plot was prematurely set in motion. It is believed that the plot was originally intended to coincide with the railway strike due to take place on 20th December but which was eventually called off. On Sunday, 8th January, the anarchist outbreak became general, the more serious incidents being at Barcelona, Lerida, Valencia, Cadiz and in the neighbourhood of Madrid. Everywhere the scheme appears to have envisaged an assault on the barracks and military posts, in the belief that they would be found almost deserted on a Sunday.

In all cases the attacks failed, but a considerable number of the police, civil guard and *Guardias de Asalto* were killed in the disturbances.

Subsequent investigations have revealed extensive ramifications of the plot in all parts of Spain together with "cells" in the army, but there is no evidence to show that any military element was connected with the movement; indeed, the soldiers appear to have acted loyally everywhere, nor is it probable that the Monarchists were concerned. The plot was undoubtedly organised by the Anarchists (*Federación Anarquista Ibérica*) with strong foreign financial backing. The situation is now once again normal.

Military frontier areas.

By the Decree of 15th February, the new boundaries of the military frontier areas are laid down. The frontier zone is divided into four sectors as follows :—

- (1) Pyrenees or North Frontier.
- (2) Portuguese Frontier.
- (3) North Coast.
- (4) East and South Coast.

The entire area of the Balearic Islands, the Canary Islands, and Spanish possessions in Africa will be regarded as military territory.

In the military districts there will be no restrictions in regard to building with the exception of roads, railways and aerodromes, which must be submitted for the approval of the War Ministry.

MOROCCO.

*Spanish Zone.**Army reductions.*

A Circular Order of 26th December fixes the establishment of the various units of the army in Morocco for 1933. These came into force with the new Spanish Budget on 1st January 1933, and entailed a slight reorganization and a reduction of some 245 officers and 5,280 other ranks. The total strength is :—

Officers, 1,509 ; other ranks, 35,169 ; grand total, 36,678.

The principal changes are as follows :—

- (i) Suppression of the Military Commands of Ceuta and Melilla, the troops coming directly under the orders of the G.O.C. the Circumscription.
- (ii) The 8 *Cazador* battalions to be reduced to 7 by the suppression of 1 battalion in the Western Circumspection (the battalion to be disbanded will be decided by ballot).
- (iii) The remaining 7 *Cazador* battalions will form two Infantry Groups, one in the Western Circumscription consisting of 4 battalions, and the other in the Eastern Circumscription, with 3 battalions.
- (iv) The cavalry Squadron of the *Tercio* to be suppressed.

- (v) The *Tercio* to consist in future of 2 Legions each of 3 *Banderas*.
- (vi) Cyclist sections are to be converted into platoons.
- (vii) The number of military hospitals will be reduced to three, *viz.*, Tetuan, Ceuta and Melilla. All other hospitals, both military and civil, will be converted into subsidiary hospitals under these three main hospitals.

In this reorganization, preference will be given to the volunteer personnel. All surplus soldiers will be discharged.

Surplus officers will be placed *en disponibilité*.

Administration.

A decree reorganizing the administration of the Spanish Protectorate of Morocco was published on 6th January. All officials who have held posts for more than nine years in Morocco will be retired. The High Commissionership is henceforth attached to the Presidency of the Council, so that the High Commissioner will be under the direct orders of the Prime Minister instead of the Foreign Minister, and all officials, both civil and military, will be appointed by the former.

Orders and decrees affecting Morocco must be approved by both the Calipha and the Prime Minister, and will be published in the official "Journal" of the Protectorate before taking effect in that country.

New Gun.

The Ministry of War has adopted a new 40-mm. gun for infantry, invented by Major Antonio Ramirez de Avellano (artillery). It will be known as the *Canon Acero de 40 milímetros para Infanteria modelo, 1933*; abbrev.: *C. Ac. 40 mm. I. mod. 1933*.

Military Appointments.

The following appointments have just been gazetted:—

To be Under-Secretary of War.

General de Brigada.—D. Luis Castello Pantoja, Commanding 6th Infantry Brigade, *vice* General Ruiz Fornells, stated to have resigned. General Ruiz Fornells has held the appointment since February, 1931. (General Castello was promoted *General de Brigada* in 1932).

To be Inspector-General—3rd Inspectorate.

General de Division.—D. Miguel Cabanellas Ferrer, the last Director-General of the Guardia Civil, which appointment was

abolished on the organization of the Corps following the 10th August Revolution, 1932. Previously he was C.-in-C., Morocco.

This appointment has been vacant since June 1932.

To be Chief of Central General Staff.

General de Division.—D. Carlos Masquelet Lacaci, who has been acting Chief of the General Staff since the removal of General Goded in June, 1932.

To be G. O. C. 2nd Division.

General de Division.—D. Miguel Nunez de Prado, Military Commander of the Balearic Islands. This command has been vacant since General Gonzalez was removed from it after the 10th August Revolution. It has been held temporarily by General Ruiz Trillo in addition to his other duties as Inspector-General, 1st Inspectorate.

To be G. O. C. 6th Division.

General de Division.—D. Jose Fernandez Villa Abrille.

To be G. O. C. 7th Division.

General de Brigada.—D. Juan Garcia Gomez Caminero.

To be Military Commander—Balearic Islands.

General de Brigada.—D. Franciso Franco Bahamonde, commanding 5th Infantry Brigade.

U. S. A.

Mechanization.

The Chief of Staff of the United States Army, General Douglas MacArthur, deals with the subject of mechanization at considerable length in his annual report for the year ending 30th June, 1932. After tracing the progress of mechanization from the introduction of the tank in the Great War and referring to the study of the problem in foreign armies, he states that during the past year seven combat vehicles of the "Christie" combination wheel and track type were obtained at a cost of 262,000 dollars (£55,000 at par) and 12 armoured cars of the most modern type for 190,000 dollars (£40,000 at par). Viewed solely from the standpoint of the acquisition of mechanized equipment these accomplishments appear small specially when compared with the probable requirements of the United States Army in a major mobilization; in contrast it is interesting to note that the United States

Government had made arrangements at the time of the Armistice for the production of 19,000 tanks for the 1919 campaign. Nevertheless the Chief of Staff claims that progress in the solution of such a complicated problem cannot be measured by the number of vehicles produced.

He then reviews the progress of mechanization in the various arms of the service, for the United States Army has no separate Tank Corps. The cavalry are chiefly interested in armoured cars and cross country vehicles possessing a high degree of strategic mobility, with fighting power and tactical mobility an important, though secondary, consideration. One cavalry unit, the 1st Cavalry (Mechanized) stationed at Fort Knox, Ky., has been set aside as a laboratory in which to develop tactics and test the machines made available. Development cannot come suddenly and cavalry must still depend upon mounted units in carrying out certain of its missions. While the eventual elimination of the horse can be predicted, it is certain under present conditions some mounted units must be kept available for use in emergency.

The infantry, on the other hand, require a machine with a high degree of tactical mobility even at the cost of reducing strategic mobility. An essential requisite in the assaulting tank is sufficient armour to enable it to negotiate the band of fire laid down by the defence. Defence against small arms fire alone is possible, anything else being impracticable owing to the weight of armour which would have to be carried. For protection against artillery fire the tank must rely on mobility and the use of ground.

The Tank School has been incorporated as a part of the Infantry School at Fort Benning, Ga., during the year.

The artillery also has made progress in substituting machines for animals, and early mechanization of practically all field artillery can be predicted. This arm is not primarily concerned with protective armour for its personnel and the problem is principally one of mobility.

The Chief of Staff next reviews some of the limitations governing the practical application of mechanization. He mentions the inability of armoured fighting vehicles to negotiate unsuitable terrain such as swamps, mountains, thick woods, streams and extremely rough ground. Another factor is the lack of sustained defensive power in machines whether armoured or not, their usefulness in battle being limited to situations demanding continuous movement.

If the attack is to be supported by strong mechanized units, development in infantry equipment must be towards the inclusion of greater numbers of weapons capable of disabling the tank. A factor complicating tank design is the continuous progress in producing bullets of extraordinarily armour piercing qualities. A very high velocity bullet (5,800 feet per second) has recently been developed which gives promise of being able to pierce any armour now carried on tanks and other fighting vehicles. If this development should prove capable of general application in all types of small arms, tank design and even the whole theory of mechanization will necessarily undergo revolutionary changes.

Models of armoured fighting vehicles tend to become rapidly obsolete owing to new inventions. Under present conditions General MacArthur considers that any attempt to maintain large units equipped with efficient models of armoured fighting vehicles would entail the replacement of equipment every few years at prohibitive cost. He says:— "In view of these considerations present progress towards mechanization must consist principally in the production of the best in pilot models; making precise pre-arrangements for speeding up their production in emergency; procuring annually sufficient numbers for thorough tactical test and for developing tactical doctrine of mechanized units; and indoctrinating the whole army in methods of co-operation so as to capitalize fully the inherent capabilities of these machines and make allowances for their inherent weaknesses."

Reviewing the actual production of pilot models he refers to the "Christie" wheel-cum-track vehicle which, owing to its speed, was responsible for awakening the cavalry to the possibility of supplanting the horse in some of its units by fighting machines. Seven of these tanks have been acquired during the past fiscal year and are being tested by both infantry and cavalry. He says: "Preliminary reports indicate that mechanical defects are still such as to bar the adoption of these machines as standard equipment, but hope exists that improved models may yet prove satisfactory." Development in armoured cars has been more satisfactory.

There can be no possibility for some years to come that units equipped with the most modern types of fighting vehicles will be available at the outbreak of war. The army must therefore be prepared to utilize existing means at the same time that it tries to develop more efficient means to achieve victory.

"This brings up the important question of providing for speedy production by commercial firms of tanks and other types of armoured vehicles in emergency. These arrangements cannot be complete while experimental types are still being developed as exact manufacturing specifications cannot be prepared. Plans will necessarily be revised continuously. In spite of difficulties definite progress in this direction has been realized the supply branches working under the supervision of the Assistant Secretary of War are making every practicable preparation. As a result it is now possible to predict that, in any emergency involving a major mobilization, tanks will reach quantity production in approximately 12 months. While this estimate may eventually be somewhat reduced, it is certain that an appreciable length of time will always be required for the conversion of manufacturing plants from peace time activity to production of this character."

The effect of mechanization on the manpower required for mobilization cannot be foreseen owing to maintenance problems. Complicated weapons and machinery applied to the battlefield have tended to require a highly trained personnel and the use of more rather than fewer men.

Philippine Independence.

On 29th December 1932, a Philippine Independence Bill was finally passed by both Houses of Congress and submitted to the President for his approval. On 13th January, President Hoover returned the bill to Congress without approving it. The President's veto was, however, subsequently over-ruled by the necessary two-thirds majority of both Houses and the measure thus became law, subject to its acceptance by the Filipinos.

The Bill provides for a Philippine Convention to be called within two years to draft a Constitution which shall then be submitted to a plebiscite of the Filipinos. If they accept this constitution they accept independence. As soon as the constitution is accepted, a ten-year period of transition government under an American High Commissioner begins. During this period American military occupation of the islands continues and certain measures are put into force to prepare the way for complete independence. Philippine immigration into the United States is regulated, and duty free exports to the United States are restricted to specific quantities and tariffs gradually intro-

duced so that by the end of the period the islands are prepared to take their place outside the tariff walls of the United States.

Finally, after the ten-year period, when independence becomes complete, the United States retains the right to maintain naval and military stations in the islands and promises to make an effort to secure the international neutralization of the islands.

GERMANY.

Changes in organization and drill movements.

The new organization of companies in 3 platoons each of 3 homogeneous groups (*Einheitsgruppen*) of a light automatic section and a rifle section, and a new column of route system (column of threes instead of column of fours).

German Army Orders of January, 1933, lay down that the organization of nine homogeneous groups will now be adopted in all rifle and pioneer companies. In addition, other units (*e.g.*, cavalry, &c.) will adopt this organization and the column of threes when fighting or marching dismounted.

REVIEWS.

"Modern Military Administration, Organisation and Transportation." BY MAJOR-GENERAL J. C. HARDING-NEWMAN,
C.B., C.M.G.

(Messrs. Gale and Polden, Ltd., London, 1933) 2s. 6d.

Many men who retire from active employment feel the urge to put down on paper something of the experience they have gained in the hope that thereby they may benefit the younger generation. Some write a 'Story of My Life,' and when the writer is an outstanding national personality, a public is assured. When the writer has led a life off the beaten track, full of adventure and strange occurrences, a public to read his 'Life' will not be wanting.

The author of "Modern Military Administration, Organization and Transportation" belongs perhaps to a third category. He has no desire to inflict on the public his personal history but he does wish those of his own profession to benefit by his knowledge and experience of his subject. In this pamphlet he hopes to appeal to "a wider public than the ranks of the Regular, Territorial and National Armies of this country and the Dominions."

Unfortunately he has chosen a title for his work which definitely will not attract the non-military public. Indeed it will not attract the military reader except perhaps those who already are interested in the subject or who are serious students of military matters. I use the word 'serious' with intention because the author has a style of expression which is often not easy to follow, a style which will soon tire the casual reader.

It is not possible in a short note to comment on the very great range of subjects which are covered in this pamphlet of eighty pages. Those portions of the work which give the teachings of experience and principles in matters of transportation are of particular value to the student. In other places there are expressions of opinion which although it is not possible sometimes to see eye to eye with the writer, definitely stimulate thought and put a different view on matters which have come to be accepted by most soldiers as irrevocable.

W. V.



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EDITORIAL.

The essays submitted for the 1933 Gold Medal were, on the whole, disappointing, although the total entries received were larger than for some years past. The Judges have recommended that the Gold Medal should not be awarded—the fifteenth occasion on which it has been withheld since the competition was started in 1872. With this opinion the Council of the Institution have agreed.

The best essay in each of the two subjects has been awarded half the monetary prize, and in this issue we publish the paper submitted by "Manuscript" on subject (ii):—

"Discuss the tactical employment of Light Tanks,

(a) with cavalry,

(b) with infantry,

in both the plains of India and in the mountainous country of the North-West Frontier. Particular reference should be made to the problems of Maintenance and Supply."

"Manuscript" has written a good paper, full of meat for the cavalryman and, in its main essentials, sound. But, the writer, being a cavalry man, has devoted his attention to the mounted aspect and has chosen to ignore the full terms of the subject set forth. He has made insufficient reference to the Mountain Warfare difficulties, and has fought shy of a thorough examination of the maintenance problem. There is a tendency all through to erect cock-shies for the fun of knocking them down, and the essay is not free from inconsistencies.

For example: "the Light Tank Company may well.....be sent on ahead of the advanced guard to seize a tactical locality," and later: "there is no question of their being asked to hold on to any specific piece of ground as infantry must do. For this they are entirely unsuitable."

Again, the writer is too ready to ask for more, a tendency noticeable in all our experimenters with mechanised weapons. He recommends the addition of all sorts of vehicles, tracked and otherwise, for purposes of communication, command and extra personnel. All these would only add to the famous "tail" of the modern army and would stultify the very purpose of mechanisation. Finally, the main criticism of the essay must be its disregard for the problem set regarding the tactical employment of Light Tanks with infantry. "Manuscript" devotes twenty-three type-written sheets to the tank-cavalry role and only one and a half to their co-operation with infantry. This omission was pounced upon by all the Judges and is the main reason why the paper was not considered of sufficiently high standard to justify the award of the Gold Medal.

Despite this detailed criticism of the essay, we can cordially recommend it to the attention of those of our readers who are interested in this most important aspect of training, but we must at the same time express our polite disagreement with some of the conclusions reached therein. In the next issue of the Journal we will publish the best essay received on the alternative subject concerning the thorny problem of increased mobility on the North-West Frontier.

* * * * *

It has been unfortunate for the Government of India and Army Headquarters that the recent disturbances on the North-West Frontier have coincided with what might be called the "silly season" of Indian politics. The amount of hot air and ink expended on criticisms of the unavoidable operations against India's enemies would be enough to inaugurate Federation. Because some misguided and completely ignorant politicians in England raised their petulant voices against the use of bombing, the uninstructed press of India swelled the chorus of condemnation, and succeeded in raising a spurious agitation against almost any action to maintain peace on the border. This is a remarkable manifestation of public opinion and augurs no good for the future.

**Frontier
Events.**

To the soldier the problem was comparatively simple. There were two distinct operations which happened to be simultaneous; one against the Bajauris, and the other in defence of the Halimzai tribe against the aggression of the Upper Mohmands. During the summer certain sections of the Bajauris in the Chaharmung Valley gave sanctuary to a mysterious stranger who proclaimed that he was a relative of Amanullah, and that his intentions were to raise the tribes against the Government of Afghanistan. The powers of mischief of an agitator of this description on the Indian side of the Durand Line are well known, and, apart from Government's international obligations in such affairs, it was obviously to our interests to eject the fire-brand. The Bajauris refused to accept any political advice, so towards the end of July an ultimatum was presented to the effect that, if the wanted men were not handed over within a certain specified time, the Government of India would take such action as seemed necessary, either by troops or by air-craft.

This threat was carried into effect during the first week in August when the village of Kotkai was bombed from the air, the principal target being the residence of one Dilawar Khan, the agitator's principal host. Generous warning was given; the village was completely evacuated; material damage to property was effected; no lives were lost; and, finally, with the arrival of troops at Balambat, the mysterious stranger vanished. The total cost to Government for the air expenditure was Rs. 15,000/-. We can find no adequate parallel to this minor operation in recent Frontier history, so remarkable for its rapidity, for its humanity and for its cheapness. Its only disadvantage is in the disappearance of the chief male-factor, who, like the Lewanai Faquir and the Haji of Turangzai, may live to bob up again in some further villainy.

The Mohmand affair was of a different category. The Upper Mohmands have long borne a grudge against the Halimzais, a Lower Mohmand tribe whose integrity has been assured by Government. Rising from the murder of an Upper Mohmand by a Halimzai and the boredom which follows the end of the harvest season, a small *Lashkar* of Upper Mohmands invaded the Halimzai country in the middle of July. They were routed and returned to their country in a dangerous frame of mind. The Government of India, thereupon, in pursuance of the promise made last year to afford protection to the

'assured' tribes, decided to build a road from Shabkadr into Halimzai territory as far as Ghalanai so that assistance would be quickly available from British India for the threatened tribes.

Events then moved swiftly. The enemy collected two formidable *Lashkars*, one near the Khapak Pass and the other near the Nahakki Pass, and were preparing to invade the Halimzai country which was also in a state of mobilisation. In the meantime, however, the Peshawar Brigade had reached Dand Banda, the Nowshera Brigade were at Pir Kala, and the Mohmand Blockade line was held by cavalry, Frontier constabulary and armoured cars.

This prompt action by the military forces, combined with the threat of air action—reconnaissance machines flew daily over the turbulent area as a gentle reminder of the long arm of the law—discouraged the Upper Mohmands. Desultory fighting and sniping occurred, with the tribesmen getting the worst of it. Reconnaissance aeroplanes were being continually fired at and a stern warning was issued that combined operations against the hostile *Lashkars* would be taken in the Kamalai area. These warnings were dropped on the 17th August and had excellent results. Next day a *Jirga* was convened, and as a result, the Upper Mohmand *Lashkars* decided that it would be wiser and safer to disperse. Malcontents continued to shoot up our camps and road protection troops and it was not until the 22nd September that 'peace' was formally declared.

What are the results of these operations? Firstly, a metalled road has been constructed from Shabkadr to Yusuf Khel, a distance of about twenty miles. Secondly, confidence in the strength of the Government of India to afford protection to its friends has been established in this particular area, with a corresponding disclosure of strength to the ever-troublesome Upper Mohmands and their kindred. These results, in themselves excellent, are to our mind inconclusive. There are great tracts of unadministered territory such as Bajaur and the Upper Mohmand countries which will continue to be running sores until some definite progressive policy of peaceful penetration by road-making and continual contact is undertaken by Government. Every year, dismally, we note these eruptions and approve of the palliatives administered, but the physician's day is over; we need a surgeon.

The other important aspect brought to the forefront by this small expedition is the use of aircraft for bombing purposes. Sentimentalists in England and Geneva, visualising the destruction of

Piccadilly Circus and the Place d'Etoile, imagine that the same slaughter of non-combatants occurs whenever a Frontier village is bombed. This view is of course a totally wrong one. We must, however, realise the world unpopularity of air bombing, and that we may be forced, for the sake of the greater cause, to limit its employment against tribal villages. (Incidentally, why an air bomb dropped after 48 hours' notice on an empty hamlet should be more unpopular than a bayonet inserted into the inhabitants is a question to which only the vociferous detractors of air action will be able to reply).

We shall soon be fighting on the frontier with kid gloves, an article of attire to which we, perhaps, could grow accustomed,—if only the armed and savage tribesmen would adopt similar sartorial refinements.

* * * * *

This Mohmand trouble is perennial and it would be foolish to expect that the termination of present hostilities is anything but a temporary truce. It is an extraordinary fact that educated public opinion in India accepts these frontier disturbances as ordinary, exciting for the moment just as a Test Match is exciting, but liable to be dismissed into limbo with all other newspaper sensations. Let us, therefore, review Frontier eruptions for the last ten years lest we forget that even current history may have its lessons.

1923. *Murders*.—Major Anderson and Major Orr (Khyber).

Mrs. Ellis (Kohat).

Captain and Mrs. Watts (Parachinar).

Major Finnis and Captain Baker-Jones (Zhob).

Operations.—The occupation of Razmak. The handing over of Wana to Khassadars. 37 Bombing flights carried out against the Ahmadzai Wazirs (Tochi).

1924. *Murders*.—Lient. G. H. Tapp (Sarwakai).

The Political Naib Tehsildar (Wana).

Operations.—Extensive air operations against Drap (Waziristan) and minor reconnaissances over Jalal Khel and Spli Toi.

1925. *Operations*.—Air operations lasting for 54 days against the Abdul Rahman Khel, Guri Khel and lesser sections of the Manzai Mahsuds.

Local flights round Razmak.

1926. A most peaceful year for the military forces. Excepting for three Indian soldiers shot on the Bannu perimeter, there was no disturbance.
1927. Trouble in the Upper and Lower Mohmand countries where the *anti*-British Haji of Turangzai and the Faqir of Alingar raised *Lashkars* threatening British territory. Air action taken. Rising from communal disturbances in Lahore, a Hindu boycott forced over 400 trans-Border Hindu families to seek refuge in Peshawar.
1928. *Operations*.—The blockade of the Madda Khel Wazirs. Minor bombing operations against the Giga and Nekzan Khel Mahsuds.
1929. *Murders*.—Lieut. M. Stephen, R. A., and Assistant Surgeon J. R. H. Cabral, I. M. D., near Razmak.
Operations.—Re-occupation of Wana. Minor trouble with the Haji Khel Chamkannis in the Kurram.
1930. Riots in Peshawar, Dera Ismail Khan, Bannu and Thal. Red Shirt agitation widespread, particularly in Mardan, Shabkadr and Charsadda.
 The Faqir of Alingar and the Haji of Turangzai join forces and create hostile *Lashkars* in Bajaur and Mohmand countries leading to the manning of the old Mohmand Blockade Line
 Air bombing.
 Two Afridi attacks on Peshawar. The occupation of the Khajuri Plain. Trouble in the Kurram.
 In Waziristan attacks on Boya, Datta Khel and Siga Air bombing.
 Razmak Column opposed near Tanda China.
1931. *Murders*.—Lieut. Synge and Private Whawell, R. T. C. (near Sarwakai).
Operations.—Three brigades in Khajuri until a settlement was effected with the Afridis in October.
 A year of air activity when valuable reconnaissances were carried out over Tirah and the Mohmand countries.
1932. More trouble in the Bajaur and Mohmand countries resulting in further air activity.
 The Chitral Relief opposed.
 The North-West Frontier Province raised to the status of a Governor's Province.

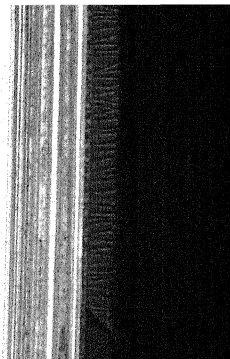
In this rough catalogue of events we have omitted all the forgotten internecine disputes and alarums which occurred among the tribes, particularly the Afridis and Orakzais and in the states of Buner, Dir and Swat. These settled themselves by a little blood-letting or by the intervention of the Political Authorities. They should be borne in mind, however, if one visualises tribal territory (as we do) as a boiling cauldron, sometimes simmering gently, but more often boiling over in the direction indicated by the insertion of another faggot in the fire underneath. This diary of frontier unrest speaks for itself and we refrain from comment. But we would like to know the name of the Government of India wit who first dubbed tribal no-man's land as "Unadministered" Territory; if he were alive to-day he would be grieved to see that his appellation is so happy.

* * * * *

The rise of the Nazis to supremacy in Germany was almost inevitable. Since 1919 Germany's greatest danger was **Hitlerism**. Communism, and it has been defeated by Hitler almost exactly as it was stamped out in Italy by Mussolini. Various constitutional parties in Germany rose to transitory power in their attempts to exterminate the poisonous doctrine. The Central Party, Democrats, National Liberals and Social Democrats, all succeeded temporarily in opposing the Russian-Jew gospel according to Marx, but their efforts were as flabby as those of Kerensky. Communism gained steadily, and the following table of representatives in the Reichstag in December 1932 will show its growth from infancy in 1920:—

National Socialist (Nazi) ..	196
Social Democrat (Moderate Labour) ..	121
Communist	100
Centre (Catholic)	70
German National People's (Monarchist)	54
Other parties	43
<hr/>	
Total ..	584

Internal factions among the other parties gave the Communist bloc a relative appearance of cohesion, but at the same time isolated it as a definite menace to be fought and conquered. And then Hitler, the dynamic Nazi leader and demagogue, sweeping all the other parties with him in his anti-Communist resistless fury, leapt into the lime-light.



The year 1933 will therefore be historical for the rise of Herr Adolf Hitler to the Dictatorship of the German Republic. Hitler, who is as widely execrated as were Mustapha Kemal and Mussolini in their early years of accession to power, will probably live to assume similar power and grandeur on the European stage. He has all the *flair* for dictatorship; a passionate patriotism, superb ruthlessness in dealing with those whom, rightly or fanatically he deems to be the enemies of his ideals, a rather engaging contempt for the world's opinion of his methods, courage, conceit, and a dramatic sense for organization and publicity. Like Mr. Gandhi he is prone to indulge in sweeping assertions and generalities and to dislike the chilly reality of international facts; but, unlike the Mahatma, he has no verbal qualms regarding the benefits of force for the purpose of implementing his policy.

It is idle to decry Hitlerism. Nazi dominance in Germany is now an accomplished fact, and although its flamboyancy, its rude upheaval of European polity and its crude reversion to the Middle Ages, are discordant elements in the harmony of ordered diplomacy, the world has now got to readjust itself to this new and upsetting factor. Since the Treaty of Versailles the resurgence of the broken German Empire into world politics and power has been a gradual, stubborn process from which many nations, in spite of their bitter war memories, have not been able to withhold their sneaking sympathy. As it became more generally realised that her exclusion was impossible, we have witnessed the attempts made during the last eight years to include Germany in all the efforts designed to establish the economical re-organisation of Europe.

We were content to watch the peaceful policies of Von Hindenburg, Stresemann, Dr. Brüning, Von Seeckt, the redoubtable General Von Schleicher and the pathetic Von Papen. We read their utterances at the innumerable European conferences, and were inclined to sympathise with them in their impotence against the inexorable sentence of Versailles in June 1919. Indeed, there were many in England, Italy and America who were irritated and ashamed by the uncompromising attitude which France always adopted towards her hereditary foe. Where are these German post-war leaders now? Some are dead, some forgotten and some have fled. Only Hindenburg remains. The Nazi dictatorship is supreme, and every day it consolidates its internal lines and presents an unbroken front on all

its borders. The youth of Germany, for whom the Great War is but a humiliating historical fact due to no fault of their own, are on their feet again. They wear the Swastika, symbolical of Victory in Battle; they cheerfully submit to the "voluntary work" military organisations with all their drill and discipline; they are controlled and obedient, while daily they swell their numbers with the excitement inculcated by unscrupulous anti-foreign propaganda.

It is impossible to prophesy where all this patriotic agitation and Prussian *furor* will find an outlet. In their original appeals for power to the masses the Nazi leaders outlined a programme which cannot but help to cause war. These, like British election promises, are liable to be over-estimated in both their scope for mischief and their hope for the electorate. But they deserve notice. The main objects of this programme are, firstly, the revision of the Treaty of Versailles principally in the clauses dealing with War Guilt, rearmament and equality of armaments; secondly, the *Anschluss* with Austria; thirdly, the Nazis want the Corridor and Silesia back from Poland, and Danzig restored from its isolated freedom. There are minor payments to be credited also; such as Northern Schleswig from Denmark, Memel from Lithuania, Eupen and Malmedy from Belgium, and, if possible, the rendition of the former German overseas colonies. Finally, dark threats have been uttered regarding the present constitutions of the Saar and Alsace.

On the face of it this is an ambitious scheme which envisages nothing less than the restoration of pre-war Germany. Obviously it can never reach achievement; but when an overwrought Germany, disappointed of its immediate hopes (as it is certain to be), shows restiveness, it is not unlikely that its ruler may attempt to fulfil at least one of these promises. Then danger will arise. The present situation in Germany contains all the embers of war, and if the Nazis continue to fan them so windily there is every possibility of another European conflagration.

During the year, continuing the progress instituted by our predecessors in office, several innovations and changes have been made by the new Executive Committee. The Library, now outgrown in its original dimensions, is being completely overhauled and re-classified. The new catalogue will be available at the end of the year and will be an up-to-date production containing all military classics issued since the Boer War, as well as a compre-

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hensive list of more general subjects. It would be of great assistance if members requiring the new catalogue would register their names now for their copies.

In order to assist officers working for the Staff College we are now able to issue all tactical schemes and precis of lectures at a flat rate of eight annas per scheme (cost of maps exclusive). We have secured from the General Staff fifty copies of the schemes set for the 1933 Staff College Course. If this supply becomes exhausted, it will be necessary to reprint them and the charges will then, necessarily, be slightly greater.

We would draw attention to the subjects set for the Prize Essay Competition, 1934, by the Council of the Institution. Two alternative subjects have been set, both of which should give scope for both civilian and military members, and we hope for a larger entry than usual. We also hope for Indian participation; up to the present there have been no Indian competitors for these Prize Essays.

Our membership continues to increase at a satisfactory rate principally among army officers. We would like to enrol more members from the Royal Air Force and the other services in India, as we consider that a wider interchange of ideas on all the important subjects which afflict the post-war forces would be to the mutual benefit of all arms. We would again emphasise that for the current year the Entrance Subscription has been waived; it is unlikely that this concession will continue in 1934 when, it is earnestly hoped and expected, the 5 per cent. cut will be restored.

During this year our Historical Research Section has been overworked. It is surprising and encouraging to see how many of our readers take advantage of this facility, and we endeavour always to provide the information required. Occasionally this willingness recoils on our own heads in the shape of technical questions by members which are outside our province. We regret that we cannot provide the subject matter for essays or lectures set by formations in India; nor is it easy to produce all the names of regimental officers for the last seventy years, giving their dates of promotion and war services! Recently we were asked to give the latest official definition of "Strategy," an interesting line for research but rather vitiated in its seriousness by our correspondent's admission that the information was required to settle a bet. We therefore declined the responsibility.

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GOLD MEDAL PRIZE ESSAY COMPETITION, 1934.

The Council has chosen the following subjects for the Gold Medal Prize Essay Competition for 1934 :—

- (a) “It is often said that Indians are by nature divided into what might be called martial and non-martial races. This is a mere myth.....” (p. 65, Indian Military College Committee’s Report).

Examine this quotation and state your own conclusions,

or

- (b) The problem of the French in dealing with the tribes on the Southern and Eastern frontiers of Morocco, in the mountainous region of the Atlas, is in many ways similar to ours on the North-West Frontier of India.

Contrast the two methods of control and administration and state in some detail what is, in your opinion, the best system of defence and control of the North-West Frontier of India (from Chitral to the Persian Frontier inclusive).

The following are the conditions of the competition :—

- (1) The competition is open to all gazetted officers of the Civil Administration, the Royal Navy, Army, Royal Air Force, Auxiliary Forces and Indian State Forces.
- (2) Essays must be type-written and submitted in triplicate.
- (3) When reference is made to any work, the title of such work is to be quoted.
- (4) Essays are to be strictly anonymous. Each must have a motto, and, enclosed with the essay, there should be sent a sealed envelope with the motto written on the outside and the name of the competitor inside.
- (5) Essays will not be accepted unless received by the Secretary on or before the 30th June 1934.

- (6) Essays will be submitted for adjudication to three judges, chosen by the Council. The judges may recommend a money award, not exceeding Rs. 150, either in addition to or in substitution for the medal. The decision of the three judges will be submitted to the Council, who will decide whether the medal is to be awarded and whether the essay is to be published.
- (7) The name of the successful candidate will be announced at a Council Meeting to be held in September or October 1934.
- (8) All essays submitted are to become the property of the United Service Institution of India absolutely, and authors will not be at liberty to make any use whatsoever of their essays without the sanction of the Council.
- (9) Essays should not exceed 15 pages of the size and style of the Journal, exclusive of any appendices, tables or maps.

ESSAY.

"Discuss the Tactical Employment of Light Tanks,

(a) with Cavalry,

(b) with Infantry,

in both the plains of INDIA and in the mountainous country of the North-West Frontier. Particular reference should be made to the problems of Maintenance and Supply."

BY "MANUSCRIPT."

(NOTE:—Neither the Council of the U. S. Institution nor the Judges of the Essay Competition, 1933, agree necessarily with the opinions of the author).

Light Tanks with Cavalry.

The object of the first part of this paper is to examine the minor tactics of the employment of Light Tanks in co-operation with Cavalry, not to discuss grand tactics or the principles of employment of mobile forces.

The most satisfactory method, however, of approaching the subject appears to be first of all to review the characteristics of the Cavalry arm, and define its most important and most probable tasks, thus visualizing the circumstances in which the co-operation of Light Tanks is most likely to be required. From these premises it will be easy to deduce clearly what the requirements are, and how they can most satisfactorily be met.

The main characteristic of Cavalry is its MOBILITY, which confers upon it the power to—

- (a) move and fight at a distance from the main armies.
- (b) perform reconnaissance and protective duties without causing delay to slower moving troops ;
- (c) act against an enemy's flanks and rear ;
- (d) carry out a rapid and vigorous pursuit ;
- (e) fight a delaying action and disengage without being seriously committed ;
- (f) move quickly from a position in reserve to take advantage of a fleeting opportunity created by the other arms, exploit success, or restore a dangerous situation.

In addition to the above the mobility of Cavalry confers on it certain other capabilities, which are worthy of mention, *viz.*—

- (a) elasticity, or power to move in extended formations and concentrate rapidly, *i.e.*, controlled dispersion ;
- (b) speed of movement across fire-swept areas, thereby avoiding heavy casualties ;
- (c) power to charge and assault the enemy with the sword ; the “arm blanche ;”
- (d) ability to co-operate with Armoured Fighting Vehicles ; and, as a corollary, to avoid getting to close grips with hostile Armoured Fighting Vehicles.

An analysis of the above characteristics and capabilities shows that Light Tanks possess them also to a marked degree, subject only to certain limitations as to mobility and maintenance. In addition they have the invaluable assets of immunity from S. A. A. fire and ability to fire their machine guns while moving.

It is advisable at this juncture to compare the relative mobility of Light Tanks and Cavalry, as it is upon this factor that the question of their co-operation mainly depends.

Over favourable ground Light Tanks can move distinctly faster than Cavalry, and this will usually enable them to make good delays caused by obstacles. (It is always preferable for them to go round two sides of a triangle along a known track, than to risk, for example, a difficult unreconnoitred obstacle on a more direct route with the consequent additional mechanical and crew strain).

Apart from maintenance difficulties, which will be referred to later, the main obstacles to Light Tank Movement can be summarized as follows :—

- (a) Any river, canal or stream of more than a certain depth. The stronger the current the less depth can a light tank negotiate owing to water piling up. The conformation of the banks is also all important. (Their fording capacity can doubtless be increased by improved design, and much can be done by Sappers in the way of flying bridges, rafts, etc., such as are at present being experimented with) ;
- (b) rocky or boulder strewn ground ; this may well be impassable to them ;

- (c) heavily inundated or rain sodden ground, which reduces their speed ;
- (d) very precipitous hill and *nala* country, which may either be impassable to them or only passable at a very slow speed.

Cavalry can traverse all these more rapidly than Light Tanks, and even where Light Tanks are definitely obstructed by them can often carry on. On the other hand there will be occasions when Light Tanks will be able to move over bullet-swept zones where Cavalry are either partially or entirely held up.

What is perhaps not fully realized is the extent to which the efficient co-operation and mobility of these arms depends on their close association and understanding of each other. Thus when all ranks of the Cavalry are 'Light Tank minded' they continually study the ground over which they move from the Light Tank aspect, and do not forget to send in information on the subject. At the same time the Light Tank Officers and men are afforded opportunities of seeing how Cavalry move across country. Mutual confidence is thus established. The use of special Cavalry Liaison Sections, to "ground scout" for the Light Tanks, can also be practised. It is obvious that, when the going is good, the Light Tanks will leave a Cavalry Liaison Section far behind, nor can it work in bullet-swept zones. It may also be said that Light Tank personnel should be capable of reconnoitring their own ground, but there is no doubt that, given practice, and used with forethought, such a Liaison Section can be of great assistance in difficult country.

The above leads to the conclusion that in so far as mobility is concerned, Light Tanks are eminently suitable for co-operation with Cavalry over normal ground, though it is essential always to remember the most serious difficulty, which is that as often as not where the Cavalry can go comparatively fast the Light Tanks may have to go slow, and *vice versa*. Just short of an objective in an attack, for example, there may be an unforeseen obstacle which horses can surmount without checking but which will hold up Light Tanks for an appreciable period.

From the above emerges the first and most important basic principle underlying the whole tactical employment of Light

Tanks with Cavalry. It is best described by the following quotations:—

- (a) From Tank Training, Volume II, 1927, 263. "The conception of Armoured Fighting Vehicles operating in close physical contact with Cavalry.....is out of date. They are weapons which make their presence felt at the right time and place by methods best suited to their characteristics";
- (b) from Cavalry Training, Volume II, 1929, 85 I. vi. "Cavalry and Tanks should never be ordered to conform rigidly to each others' movements, as such action will hamper the initiative of both."

Whenever it is in any way feasible the Cavalry and the Light Tanks should always co-operate, but their co-operation must be *elastic*; sometimes one will play the more important part in an operation, sometimes the other.

Before proceeding with the actual details of minor tactics in their co-operation it is next necessary to define the basis of discussion more closely by an examination of the following:—

- (a) The most probable and most satisfactory allotment of Light Tanks to Cavalry;
- (b) the scales of opposition and the types of terrain envisaged in various circumstances;
- (c) the actual tasks which are most likely to be allotted to the Cavalry when the Light Tanks are co-operating with them.

(a). Our Cavalry is divided into Army Cavalry, the larger bodies acting under the Commander-in-Chief, and Divisional Cavalry, the Regiments which are allotted as an integral part of each Infantry Division. In the Army in India the highest existing Cavalry formation in peacetime is the Brigade, though it is possible that in certain war contingencies a Cavalry or "Mobile" Division might be formed. The Cavalry Brigade in India is a self-contained, well-balanced, handy formation, able to use its mobility, and also, with its six gun R. H. A. Battery and its Machine Guns and Vickers Berthiers, possessed of considerable hitting power, which can if necessary be used to give covering fire to Light Tanks.

It is suggested that normally Light Tanks should not be placed under the orders of a smaller Cavalry Force than a Brigade, except when so temporarily sub-allotted by the Brigade Commander for a specific purpose.

The Light Tank Company, at present organized with a Headquarters and three Sections (27 Light Tanks in all), is the smallest self-contained Light Tank unit from an administrative point of view, the Section of seven Light Tanks being the smallest tactical unit for fighting purposes (though a sub-section of three may on occasions be detailed for purely reconnaissance duties). In any case it is a principle of the first importance that they should not be frittered away in "penny packets".

We will assume, therefore, that the normal allotment of Light Tanks to Cavalry in the Army in India will be one Company to a Brigade, and will formulate our tactical handling on this basis.

(b). Next come the scales of opposition and types of terrain, the two being more or less closely inter-related. The opposition can perhaps be suitably divided into three categories—

- (a) Not quite first class; comprising Cavalry, Artillery and Tanks, as well as Infantry, with Machine Guns and some Anti-Tank weapons and Armour piercing ammunition but comparatively poorly disciplined and organized; fairly competent Air Force;
- (b) Second class; some Cavalry of low category, a little Artillery and a few machine guns, but no Anti-Tank weapons, besides Infantry; negligible Air Force;
- (c) Tribesmen; armed with modern rifles, but with no machine guns or Artillery.

As regards the terrain, two types only, the plains and the mountainous North-West Frontier country of India, are postulated. It will be advisable here to mention briefly their peculiarities and probable effect on Light Tanks. The plains are, for the most part, uniformly flat and devoid of tactical features, with the exception of a few rivers and a large number of canals and water channels of varying dimensions.

Apart from these, a great many of which are definite Light Tank obstacles, there is nothing to obstruct movement, except recently irrigated or 'water worn' areas. Owing to the absence of observa-

tion points, and the numerous small woods and villages, however, visibility is surprisingly poor. While rendering control of the Light Tanks and successful co-operation more difficult, this facilitates the attainment of surprise. This terrain is, therefore, not unfavourable to the combined action of Cavalry and Light Tanks.

The North-West Frontier type of country comprises steep rocky ridges and hills, intersected by precipitous boulder strewn *nalas* of varying degrees of difficulty. Except where roads have been constructed only footpaths or mule tracks exist. Light Tanks can work over a proportion of this country, but not by any means all.

In a campaign in the Middle East, however, the most likely terrain is a combination of the two extremes, long stretches of flat plain interrupted occasionally by sharp rocky ridges, such as occur for example in PALESTINE or AFGHANISTAN.

The inference is that in such a Campaign the majority of the Light Tanks available will be used with the Cavalry in the plains sectors in their true mobile rôle, fighting in the mountain areas devolving mainly on the Infantry, occasionally reinforced by some Light Tanks.

Of the opposition envisaged, Class *C* need only be expected in the mountainous tracts, Classes *A* and *B* in either type of terrain.

(c) Now to take the tasks which are mostly likely to fall to the lot of the Cavalry and Light Tanks.

F. S. R., Volume II, 1919, 11.2 states:—

“The main duties of Cavalry may be classified as follows:—

- (i) Reconnaissance.
- (ii) Protection.
- (iii) Participation in battle, including pursuit and withdrawal.
- (iv) Raids and other special missions.
- (v) Use as a mobile reserve.”

Mobile troops, as opposed to the main armies, have always in the past been sent out well ahead, while the latter were still a long way apart, not only to obtain information, but to seize tactical features such as a river line, and to delay the enemy and harass their concentration in such a way that their main forces will be in a less favourable position when battle is joined. In a Middle Eastern terrain, where the comparative paucity of roads and good tracks militates against the successful employment of Armoured Cars on distant reconnaissance,

situations are certain to arise in which a Commander will wish to utilize Light Tanks backed up by Cavalry to obtain such information, to confirm or supplement air reports, to 'make sure,' even though they cannot be expected to operate at such a distance as Armoured Cars where adequate roads do exist.

During the last hundred years such tasks, though losing none of their importance, gradually became so difficult of achievement owing to the reduced assaulting powers of the mounted man against small arms fire, that Commanders were compelled to forego the advantages hitherto accruing therefrom; it now appears reasonable to suggest that the introduction of efficient Light Tanks has restored the value of the mobile troops.

Work of this nature will, therefore, undoubtedly fall to the lot of the Army Cavalry again in the future, and at the very outset of a Campaign; its success or failure may well be one of the determining factors towards final victory or defeat. Working ahead of the main armies Cavalry and Light Tanks may expect ample opportunities of carrying out all the normal operations of war; it will be sufficient for our purpose therefore if we confine our examination of the minor Tank-cum-Cavalry tactics to this type of work, and do not enter into the major tactics of their subsequent participation in the main battle, and thereafter.

The tactical doctrine thus formulated for Light Tanks working with Army Cavalry will also hold good in principle should they be employed with a Divisional Cavalry Regiment.

We now have our picture complete:—A Company of Light Tanks with a Cavalry Brigade (INDIAN War Establishment) working as Army Cavalry out in front of the main Armies, over a normal Middle Eastern terrain, with the opposition as already depicted.

It is proposed to discuss the use of the Light Tanks in such circumstances under the following headings:—

(a) On the line of march.

(b) Reconnaissance.

(c) With an Advanced Guard.

(d) Attack and pursuit against { Armoured Fighting Vehicles.
Cavalry with Artillery.
Infantry with Artillery.
Artillery.

(e) Defence; Rear and Flank Guards.

- (f) Protection at rest ; Outposts and Perimeter Camps.
- (g) N.-W. F. Warfare ; (Passage of Defile, withdrawal, etc.)
- (h) Inter-communication and Control.

On the line of march.

On the line of march the position of the Light Tanks must depend firstly, on the tactical situation (including the scale of opposition anticipated) and how it is expected to develop, secondly on the ground, and thirdly, on technical limiting factors. In any case they should not be mixed up with the mounted troops, unless this is unavoidable during a night march which should seldom be the case ; they should then be either at the head or the tail of the fighting column. Cavalry Training, Volume II, 1929, Section 86.2 states : " If secrecy is important, the movement of Tanks will *normally* take place at night, and they will have to lie hidden or camouflaged by day." This is perhaps hardly true of Light Tanks working in co-operation with Cavalry, though there will be occasions when night movement is essential. They are inconspicuous and can, it is suggested, if secrecy is all important and at all feasible, move with the Cavalry Brigade's M. T. Column, until the time for their actual participation approaches. Camouflage is not of great value as, unless the ground is very hard or rocky, it is usually their tracks which betray them to the Air, particularly those scrapes on the ground caused by sharp skid turns. After the opening actions of a Campaign, however, it seems unlikely, once the enemy have realized that there are Light Tanks working with our Cavalry, that anything but local surprise on the battlefield, due to rapidity of manoeuvre, will be possible ; they will always be on the look out for them.

Unless the route is good or there is moonlight, or they can use headlights, whether shaded or unshaded, night marching is both exhausting to the crews and uneconomical in petrol and lubricants.

Where rapidity of advance is urgent, the Light Tanks must be right forward, moving by bounds between the Advanced Guard and the Main Body so as to be readily available if required. This presents no difficulty if the Cavalry can move off the road, or if the Brigade is moving across country, when it will be in diamond or with two Regiments forward, in either case the Light Tanks being well up behind the centre of the landing regiment or regiments.

If the enemy have very few or no Anti-Tank weapons, the Light Tanks may well even precede the Advanced Guard, moving by bounds. They may thus often brush aside weak resistance before it has time to stiffen. They will only be used in this way with a particular object in view.

If not likely to be required tactically it is best for them either to move at the head of the M. T. Column, behind the Rear Guard, or when feasible independently by a separate route.

For all moves it is essential that the Cavalry Brigade Commander should study the ground before hand with particular reference to the Light Tanks, and, subject to tactical considerations, move them so that they gain the fullest advantage from it; the ideal being for them to move at their economic speed, by bounds of 4—5 miles at a time, and with sufficient periods for brakebands to cool off after hilly country, so as to obviate avoidable mechanical strain.

Reconnaissance.

When the ground is favourable, and when speed is of paramount importance and the opposition anticipated not too strong (*i.e.*, Class B or C), there will be many occasions when they can with advantage be sent on right ahead of the Cavalry to reconnoitre tactical localities. They can thus at times secure for the Commander very important information, whether negative or positive, much earlier than would otherwise be possible.

As mentioned before, it is important that Light Tank Officers and men should be trained to the same pitch of efficiency as Cavalry men in reconnaissance work. (The provision of horses in peace will greatly assist them in developing an eye for country).

Provided the enemy have no Anti-Tank weapons a Light Tank reconnaissance detachment will often be able to get close up to an occupied locality or move through a bullet-swept zone, where Cavalry could not go, and obtain very valuable information, brushing aside minor opposition.

Consider for example their value for such work through villages, high crops, etc., which are extremely difficult for Cavalry to reconnoitre.

On other occasions, where ground precludes their carrying out the reconnaissance themselves, they may by fire be able to make oppor-

tunities for Cavalry Patrols to obtain information. In this way they act in similar fashion to a reconnoitring Squadron backing up its Patrols.

Another extremely useful reconnaissance role for Light Tanks is an evening sortie to ascertain whether or no there are any formed bodies of enemy within such distance of the Cavalry, but beyond the range of their outposts, that they are likely to be able to molest them during the night or at first light.

Of course, like all other work allotted to the Light Tanks, reconnaissance tasks must only be ordered with due regard to the endurance of the crews, and to maintenance duties which will be discussed later. It is probable that very often the number of Light Tanks available, and the necessity for conserving them for more important tasks, will preclude their use in this way. If they are so used, other essentials are firstly, good orders or instructions to enable them to reconnoitre intelligently and realize the value to the Commander of particular positive or negative information gained, and secondly, adequate facilities for inter-communication.

The Commander can himself utilize a Light Tank in order to traverse bullet-swept areas and carry out personal reconnaissance, but the fighting Light Tank is not really well adapted for this purpose, as it is difficult to observe from when closed down, and the Machine Gunner would have to be dismounted. Normally reliance should be placed on the Light Tank personnel to render adequate reports.

When Light Tanks are on in advance, it may sometimes be advisable to detail a Light Tank escort, with R/T to the Commander moving up in his car ahead of the Cavalry to reconnoitre. An alternative, which will be referred to again later, is for the Commander to be provided with a track or wheel-cum-track reconnaissance vehicle of his own.

To summarize, reconnaissance is in suitable circumstances a very valuable Light Tank role, and a Cavalry Commander who does not on occasions make use of them for this purpose will be failing to obtain full value from them. It must not be supposed from this, however, that they are in any way self-sufficing for reconnaissance; as often as not it will fall to the Cavalry to find and fix the enemy for them. The type of co-operation must vary, according to the circumstances.

Light Tanks should not be used for reconnaissance tasks which can be equally well carried out by the Cavalry.

With an Advanced Guard.

The preceding remarks dealing with 'on the line of march' and 'reconnaissance' apply generally. It should be remembered that the basic role of the Light Tanks is to maintain the mobility of the Cavalry. They must not be frittered away on detachments, nor prematurely or wantonly exhausted, but by using some with the Advanced Guard and so maintaining mobility, and brushing aside enemy forward troops to seize tactical localities and discover the dispositions of the larger bodies before resistance can harden, situations which would ultimately have demanded far more rigorous action can often be avoided.

Nevertheless it should be a principle that detachments should only be made from a Light Tank Company for very cogent reasons. If Light Tanks are required with the Advanced Guard the most satisfactory solution is often to place the whole Company, under its own Commander, forward 'in support of' the Advanced Guard. The Company Commander can then push up a Section, for a limited task, to assist the Advanced Guard, keeping the Brigade Commander who himself will be well forward, informed.

The whole Company thus remains under the control of its Commander, and through him of the Brigade Commander. As has been found with the Battery, Royal Horse Artillery, in an advance this is more satisfactory than placing a Section under the command of the Advanced Guard Commander. Circumstances may, of course, arise in which for special reasons it would be advisable to place a Section of Light Tanks under the command of the Advanced Guard Commander for a specific purpose. If opportunity offers, the Light Tank Company may well, as mentioned before, be sent on ahead of the Advanced Guard to seize a tactical locality. Their use with an Advanced Guard through a North-West Frontier Defile will be dealt with subsequently.

Attack and Pursuit.

Usually the majority of Cavalry work in the opening stages of a campaign or phase of operations will be against the hostile mobile troops, and later when taking part in the main battle Cavalry will

normally be operating on the enemy's flanks or rear to harass them and exploit success. Cavalry will seldom, if ever, be called upon to carry out a mounted attack against undemoralised Infantry in position, except those of low category (Cavalry Training, Volume II, Section 1.6).

Consideration of the co-operation of Light Tanks with Cavalry in the attack will, therefore, be mainly confined to the types of attack which are most likely to fall to their lot.

Before entering into the details of their tactical handling in the attack against particular categories of enemy, what appear to be the most important general principles for all attacks will be enunciated—

- (i) The Light Tanks must not be committed prematurely, or used piecemeal, but must be kept for the decisive encounter.
- (ii) Every effort must be made to obtain surprise when they are finally launched.
- (iii) The greatest care must be taken in selecting their objectives and rallying points so as to minimise the risk of confusion between them and the Cavalry. As previously emphasised, co-operation must be elastic, though fully co-ordinated.
- (iv) The Commander must give the Light Tank Commander very careful orders and instructions, and time for him to pass them on to the occupants of every Tank, as, once loosed, inter-communication may be impracticable for a considerable period. The Light Tank Leader must be thoroughly 'in the mind' of the Cavalry Commander, so that he can instinctively act on his own responsibility in such a way that his Light Tanks will pull their full weight.
- (v) Normally the Light Tanks should be directed against the enemy's flanks and rear, with the object of silencing hostile machine gun fire; they need not concern themselves with riflemen. They should usually be given the best 'going' so that they can exploit to the full their extra speed.
- (vi) Attack does not necessarily imply actual assault or "savage rabbiting;" the best results may often be obtained by machine gun fire at decisive or even effective ranges, particularly if in enfilade.

- (vii) Light Tanks, like any other arm of the service, require the maximum possible covering fire when committed to any attack. Supporting Artillery must be ready for counter battery and anti-tank targets.

Now to deal briefly with some of the types of enemy which Light Tanks working with Cavalry may be called upon to attack. It is not proposed to consider hostile tanks, as so much would depend on their comparative performance and armament. As is the case with Armoured Cars, Light Tanks in opposition would tend to stalemate each other, the victory going to the side with the better leadership, training, and morale, and the best handled mobile artillery in support.

Attack on Cavalry with Artillery.

Even with the element of surprise attained Light Tanks will find it difficult to deal Cavalry a vital blow; they can melt away so quickly and, if committed to dismounted action, will naturally make the fullest use of any Tank obstacles.

Whenever possible, opportunities should be made for the Light Tanks to lie up and ambush hostile Cavalry. If surprise is not attainable the correct 'tactique' for the Light Tanks should be to tempt the hostile guns to drop their trails prematurely during a bound, and then to attack the Cavalry from a flank so as to drive them away from the shelter of their Artillery. This may provide an opportunity for the Cavalry with which they are co-operating. As against Infantry, in an attack against dismounted Cavalry, Light Tanks should be directed on their machine guns and light machine guns (and led horses).

Attack on Infantry with Artillery.

The primary object of a Cavalry Commander, even when he has Light Tanks working under his orders, will be—not to attack Infantry in position head on—but to manœuvre them out of their positions and get them on the move. The normal tendency of the enemy threatened with such an attack will be, on the other hand, to go to ground behind a Tank obstacle if possible. Again for the Light Tanks surprise is all important, and whenever at all feasible, their attacks should be directed from a flank or the rear on the hostile machine guns.

Attack on Artillery.

Except in the case of exploitation tasks, when the situation is somewhat abnormal, attacks on hostile guns should be avoided, or left to the Cavalry, unless the element of surprise is present, or there is a considerable volume of covering fire. When this is not the case Light Tanks may find it possible to use ground to defilade themselves from the hostile Artillery, at least from view.

Should Light Tanks ever surprise hostile guns limbered up within 1,000 yards, and if the ground is not unfavourable, a headlong dash from a flank would present reasonable chances of success. Apart from destroying the crews and teams, the impact of a light tank on a field or horse gun will presumably cause certain deterioration thereto. If, however, Light Tanks are ever committed to attacking guns which are in action, more deliberate and slightly more complicated methods are indicated. For example, one Section of the Company could be used as bait, the second to attack, and the third to provide covering fire.

The bait Section should attempt to get the guns firing at them from comparatively innocuous range, while the remaining two Sections, the Attack Section leading, slip round to the other flank. The Attack Section then endeavour to interpose the Battery teams, etc., between themselves and the guns and shoot them up from behind at short range, while the third Section give covering fire with only turrets exposed. In favourable circumstances smoke might be of great value in assisting Light Tanks to close with such an enemy.

Pursuit.

Cavalry Training, Volume II, Section 7.2 says "The power of Cavalry in pursuit can be greatly increased by the bold employment of Armoured Cars and Machine Guns in carriers, which by making wide detours, etc."

How much truer is this of Light Tanks. The combined action of the two may then well be decisive, provided the Tank crews and the Tanks can stand the strain imposed by exploitation of their powers to the full.

Cavalry Training, Volume II, Section 7.5, says "Fatigue and deterioration of horseflesh will be disregarded—risks, which at other times would not be justifiable, must be freely accepted."

This must be applied to Light Tanks with certain reservations ; as with Cavalrymen, it is obvious that the endurance of all ranks must be taxed to the uttermost if circumstances require it, but if Light Tanks are to continue functioning at all, spare crews, spare parts, and petrol and lubricants must be got up at regular intervals in a way that is not necessary for Cavalry.

Defence, Rear and Flank Guards.

It is unlikely that in mobile warfare Cavalry will have to hold a prepared position for any length of time. For them any form of rigid defence is most undesirable ; their role is to use delaying action as far ahead as possible of the locality to be safeguarded.

The main role of Light Tanks working with Cavalry in the Defence will be the decisive counter-attack, along previously reconnoitred routes, either directly the enemy have penetrated the position, or earlier, if a suitable opportunity occurs (Cavalry Training, Volume II, Section 88·3).

When Light Tanks are launched on a counter-attack it is most important to limit their objectives clearly and fix a suitable Rallying Point or Points. It may not infrequently be advisable to send them ahead of the Cavalry to delay the enemy's advance first at some suitable point beyond the latter's reach. This they are quite capable of doing by adopting an elastic manœuvring role, keeping concealed, and opening fire suddenly with only turrets exposed. There is no question of their being asked to hold on to any specific piece of ground as Infantry must do. For this they are entirely unsuitable.

Light Tanks are also of great value in Defence for checking hostile attempts to outflank.

Rear and Flank Guards.

For Light Tanks working with Cavalry a Rear Guard action is very similar to the Defence. They will normally be used to counter-attack or to check hostile enterprise on the flanks.

Again their counter-attacks may take place either well away should circumstances permit, or not until the Cavalry have become comparatively closely engaged. The counter strokes may be either by fire of stationary machine guns from a suitable position, or by actual assault. If feasible, when the Light Tanks are in ambush, a few

cavalrymen to keep hostile patrols at a distance with rifle fire, and so not disclose their presence prematurely, are advisable. Surprise is all important.

It seems unlikely that within the Cavalry Brigade it will often be necessary to utilize Light Tanks with a flank guard, though such occasions may sometimes occur, for example when the normal rate of advance of the Brigade is for some reason retarded, and there is a definite threat from a flank, possibly from enemy Armoured Fighting Vehicles. Their flank guard work will therefore be mainly confined to occasions when the whole Brigade is doing flank guard to another force.

In either circumstances, unless owing to the lie of the country some locality exists to which they can be sent forward with real advantage, they should usually be kept in the flank guard commander's hand as part of his mobile reserve, and only employed when he has received fairly definite information. If committed prematurely when carrying out lateral protection, it is all the more difficult to extricate them in time to counter what subsequently proves to be a more serious threat.

Protection at Rest. (Outposts and Perimeter Camp).

Light Tanks must have regular opportunities for routine maintenance, but there seems to be no reason why they should not at times be located in an outpost system, so that their searchlights and machine guns can be turned on to one or more localities in which enemy might be expected to mass. And, as mentioned in an earlier paragraph, an evening sortie by Light Tanks just before dark which can satisfy the Commander that there are no formed bodies of the enemy within 9 or 10 miles or more of his force, *i.e.*, considerably further than normal Cavalry night outpost dispositions can ensure, must be most reassuring. A task of this sort will, however, frequently be prohibited by the necessity for rest and time for maintenance.

In a perimeter camp, Light Tanks should not be asked to hold part of the perimeter, but a clear track should be left the whole way round inside the outer defences, so that in emergency they can move unimpeded to any portion to use their searchlights and machine guns.

North-West Frontier Warfare.

In North-West Frontier warfare the scope of Cavalry action in the hills is limited; they cannot be expected to piquet a defile of any

size or length, though they may have to seize the mouth of one in front of the slower moving Infantry or to cover the Infantry withdrawal through the foot-hills once they have emerged from a defile. Cavalry can rarely expect that tribesmen will allow themselves to be caught on ground suitable for mounted action.

In carrying out such operations as the above, however, Light Tanks can be of the greatest assistance, provided that the ground is not so precipitous or boulder strewn as to limit their movement unduly.

When, as will usually be the case in such warfare, the enemy are not equipped with Artillery or Anti-Tank weapons, Light Tanks can with great advantage be sent on ahead of the Advanced Guard and Piquetting troops, either to cover the piquets into position by shooting up the reverse slopes of the features to be piquetted, or occasionally to seize the feature themselves, if the ground is suitable, though this will seldom be the case.

When covering piquets up into position, it is essential that, in order to avoid confusion and casualties to the piquetting troops from Light Tank fire, all the Light Tank crews should know exactly where the piquets are going to and by what route.

Another minor difficulty is the disposal of the led horses of Cavalry piquets; if the gorge is narrow and precipitous, they may have to be sent some distance from the piquet, though a more satisfactory arrangement, if feasible, is for them to proceed with the main body, M. T. vehicles being left to bring in the piquets after withdrawal. If this is not done they may be very late in rejoining, and may also delay the Light Tanks which are covering their withdrawal. For this sort of task Light Tanks have a great advantage over Armoured Cars in that they can turn in their own length in places where the latter could not turn at all.

Light Tanks are of equal value for withdrawing piquets as they can be left to the last with impunity, they are also useful, if they can be spared, for escorting the Cavalry transport column through a defile, during the passage of which they can in addition provide some Anti-Aircraft protection should it be required.

Inter-communication and Control.

The foregoing examination of the tactical handling of Light Tanks with Cavalry has shown that even with the fullest facilities for training

together, and with leadership that is potentially all that can be desired, little can be achieved without adequate machinery for inter-communication and control, both between the Cavalry and the Light Tanks and within the Light Tank Company. More particularly is this so owing to the fact that 'articulated dispersion' is one of the essentials of their co-operation; the distances apart at which they must be considered in touch for purposes of inter-communication being at times considerable.

There can be no doubt that for both purposes R/T provides the most important link. Within the Company Sets should be provided at least down to Section, if not to Sub-Section Commanders.

If it is to be the responsibility of the Light Tank Company to provide the link with the Cavalry Commander then an additional tracked vehicle or vehicles equipped with R/T must be included in their establishment. It is suggested that a more satisfactory alternative would be to provide the Cavalry Brigade Commander with a reconnaissance vehicle of similar capacity on a track, or wheel-cum-track, chassis, equipped with R/T., which could be included in the War establishment of Brigade H. Qrs. or the Brigade Signal Troop and manned by Royal Corps of Signal personnel.

Though a vital necessity, R/T alone will not suffice; at present it is only one-way and somewhat slow, though this should in time be remedied; there are also difficulties with regard to wave-lengths, interference and jamming.

Supposing for instance a Cavalry Brigade Commander is in the fortunate position of having Aircraft working with him as well as Light Tanks, and of having W/T communication with the former as well as R/T with the latter.

It will be necessary to set up the W/T Set approximately a mile from the R/T vehicle or the one will jam the other. The difficulties resulting from the multiplication of W/T and R/T Sets within a formation, apart from deliberate interference by hostile wireless, can be readily imagined.

Auxiliary means must therefore be developed to the full. There must be a galloper party for the Light Tank Company at Brigade Headquarters; this can be provided by one of the Cavalry Regiments, and might consist of a selected N. C. O., with a horseholder, and a Machine Gunner, trained to operate the Light Tank type of Machine

Gun, who when required can hand over his horse to the Tank Commander and take his place in the Tank. There is also the liaison section ground scouting for the tanks which has been mentioned before; this can in emergency be used for inter-communication purposes.

When not in bullet-swept zones and the going is sufficiently good, motor cyclist despatch riders and baby cars (of which the latter are probably the more satisfactory) are economical and rapid, but they are naturally not to be relied upon when the ground is difficult, and of little or no value in bullet-swept areas. Once contact has been gained, if R/T fails, it may be necessary to use a fighting Tank for inter-communication between the Brigade and the Tank Commander. In emergency Aircraft also can and should be utilized to convey important information or orders to the Light Tanks, and to discover their whereabouts for the Commander.

Within the Light Tank Company various codes of flag signals have been tried, and are no doubt of value though only up to a very limited range. It is also possible that at times Cavalry and Light Tanks might make use of the brief Cavalry Battle Code, but with the same limitations.

One of the most important adjuncts towards control within the Company is the development of standard tactics for different circumstances, so as to avoid as far as possible an unco-ordinated *melee*. This will be assisted if all Sections in the Company are homogeneous. It is for consideration whether it would not be advisable to eliminate the sub-section leader link, and reorganize the Company with a larger number of slightly smaller sections, say of 4 tanks each, or the maximum which it is found one man can hope to control during battle. This would greatly simplify questions of inter-communication, command, etc.

Both within the Company, down to individual tank crews, and from the Cavalry Commander to the Light Tank Commander, the vital importance of clear orders and instructions, and the one being in 'the mind' of the other, has already been stressed.

Light Tanks with Infantry.

Not only on account of their scope of action and actual speed in movement, but for almost every reason, there can be no doubt that Light Tanks are more suitable for co-operation with Cavalry than with Infantry: their retention for use with the latter must usually

result in the surrender of much of their mobility, and in the majority of cases be uneconomical.

Infantry have not the mobility either to find and fix suitable targets for Light Tanks in mobile warfare to give them the necessary covering fire when they are operating from a flank or the rear as they normally should be, or to exploit success when they achieve it. It also seems inevitable that Light Tanks working with Infantry will be mainly in demand when the latter are committed to attack a hostile force in position, and will be used for tasks which would be more suitable for Medium Tanks or at least for Light Tanks reinforced by Medium Tanks.

Apart from operations confined to the mountainous country of the North-West Frontier type, it seems probable, therefore, that the majority, if not all, of the Light Tanks available, will be utilized at all events in the initial phases of a campaign to co-operate with the Cavalry in carrying out those vital tasks which then fall to the lot of mobile troops, which have already been discussed. Possibly certain Companies might be retained in G. H. Q. Reserve.

There is no doubt, however, that in mountain warfare, providing they can move over some of the ground, Light Tanks will be of invaluable assistance to Infantry in all the more usual operations, such as piquetting a defile, destruction of a village, withdrawal, etc. In this type of warfare, in fact, they can act as mobile pill-boxes, most demoralising to the tribesmen.

Apart from mountain warfare, should a proportion of the available Light Tanks be allotted from the outset, or later withdrawn from the mobile troops, to work with Infantry, it seems probable that they will definitely be retained in the hands of the higher commander as a mobile reserve, for a decisive stroke should conditions permit, or to restore the situation.

It seems unlikely that a whole Company of Light Tanks will normally be allotted to an Infantry Brigade; a Section would be more appropriate, the Company being retained as Divisional or Army Troops. Possibly at times a Section might be utilized to co-operate with the Divisional Cavalry Regiment with advantage. Another possible role is in co-operation with embussed Infantry, though the tactical limitations of such a force are too well known to require elaboration here.

In any case the principles for their employment should not differ materially from those enunciated for their co-operation with the Army Cavalry.

Maintenance and Supply.

For Light Tanks problems of maintenance and supply are of very great importance, and will more often than not dictate the extent to which they can be employed. It follows that, in the first place, if operations of any length and severity are in view, the reserve supply of Light Tanks for replacement of total losses must be adequate.

Particularly in a Middle Eastern theatre, Light Tanks will seldom if ever be able to "live on the country" in the same way as the horse can. Bhoosa and grain can often be found and collected; Petrol and Oil very rarely.

The results of exhaustion are very different also on a Light Tank Company compared with, say, a Regiment of Cavalry. Generally speaking a Tank is either fit to run or definitely unfit, in which case it must be left behind until the defect can be put right. The horse on the other hand carries on long after he is much below par. He will, and often did in the great war, carry his rider for miles while the latter is fast asleep from exhaustion; even the most ardent advocate of mechanization will hardly claim that the Light Tank will do likewise, though over reasonable ground the two members of the crew might take turns at driving and sleeping. Even then a man driving a Light Tank, even over good going, must keep continually alert.

It appears essential that at least a proportion of the Light Tank spare crews should be carried on track or wheeled-cum-track vehicles which can come up to the fighting tanks during pauses in the operations, so as to relieve them as required. These vehicles might also carry a first refill of ammunition.

With the whole of "A" echelon carried on 30-cwt. six wheelers there is little or no hope of any such reliefs until late in the evening, as unarmoured six wheelers can seldom move across country unprotected when close up to the fighting troops, and may not be able to move across country at all without the assistance of the Field Troop. They must therefore travel with the remainder of the Brigade's "A" echelon M. T. This is not satisfactory, though it may be possible in emergency to transfer a limited amount of ammunition from the less heavily

engaged tanks to others which have run out. As regards crews, the only solution at present is that they must see through a day's operations, the reserves tackling the evening overhaul. While this is the case it seems probable that occasions may arise when full value will not be obtainable from the Light Tanks owing to crew exhaustion. Another course worthy of consideration would be to have all the Light Tanks 'portés' on 'camions' as in the French Army; the Tanks only being released when operations are imminent. This not only saves the crew, but is also much more economical in petrol and in Tank tracks which otherwise deteriorate more rapidly than other components.

Provided that six-wheelers can follow the Cavalry and Light Tanks at all, and with the assistance of the Field Troop it is surprising what difficult country they can now cross, there should be no difficulty in bringing up petrol and spare parts from supply refilling points in the evenings, at any rate sufficient for a limited number of days' operations. If no M. T. is expected to reach the Column for a definite period, then the circuit of action of the Light Tanks must be limited to what they can carry with them.

For Light Tanks working with Cavalry it is essential to eliminate the three tonner lorry from their organization entirely: at present the Company "B" echelon is much too unwieldy, and, if the ground is at all difficult, cannot be expected to be 'up' in the evening, during mobile operations, in sufficient time to admit of the necessary overhauls being carried out. The inclusion in the "B" echelon of certain special vehicles for the salvage of derelict light tanks is probably a necessity.

R/T between the Cavalry Commander, the Fighting Company, and its A and B echelons will of course simplify these administrative problems to an appreciable extent.

It follows that the Commander in employing his Tanks, must always think out the administrative problems involved beforehand, and must, in allotting their tasks, consider fully this question of maintenance.

There has as yet been no opportunity of assessing the endurance of the crews if they have to operate under war conditions in hot weather for considerable periods closed down.

Conclusions.

To summarize, it is suggested that the following are the most important conclusions which can be logically derived from an examination of the subject:—

1. The characteristics of Light Tanks make them eminently suitable for co-operation with Cavalry; with which they form such a formidable combination that they restore the former value of mobile troops.
2. Apart from a limited rôle in North-Western Frontier warfare, or against opposition of definitely low category elsewhere, their employment with Infantry is far less likely to achieve far reaching results, and must mean at least a partial surrender of one of their most important assets—Mobility.
3. Their most valuable and probable rôle will be in co-operation with Cavalry, employed at the very outset of a Campaign or phase of operations on Army Cavalry tasks, thereafter co-operating in the battle and exploiting success. The most suitable allotment as far as the Army in India is concerned is therefore a Company of Light Tanks to a Cavalry Brigade, unless a Mobile Division is created, with possibly a proportion in G. H. Q. Reserve.
4. The salient principles in their tactical handling are as follows: These apply whether they are co-operating with Cavalry or with Infantry, but perhaps require more stressing in the former case owing to the far greater mobility of the operations:—
 - (a) Co-operation, though “intimate,” in that the Light Tank Commander must be really “in the mind” of the superior Commander, and all ranks of both arms imbued with mutual confidence and understanding, must be elastic, though fully co-ordinated.
 - (b) Detachments should only be made from the Light Tank Company temporarily and for very definite reasons; whenever possible the whole Company should work under the control of the Company Commander. Light Tanks must not be frittered away in ‘penny packets’, or on unimportant tasks, or tasks which the other arms can perform satisfactorily without them. They must be

retained for the decisive blow. At the same time their most valuable characteristics of mobility and protected fire power must be exploited to the full.

- (c) "Light Tank Mindedness" must be developed in all ranks of the arms of the service with which they are working. The Commander must continually keep in mind the Light Tank aspect of every situation, and when employing them must make due allowances for their maintenance.
 - (d) In all attacks Light Tank objectives and rallying points must be very carefully selected to obviate risk of collision with their own troops; generally speaking they should be directed on the enemy's flanks or rear, their main task being to neutralize Machine Gun fire likely to hold the other arms up. Fire from stationary Light Tanks may frequently, at decisive or effective ranges, be of greater value than shock tactics.
5. (a) The machinery for inter-communication and control must be developed, the first essential being the provision of R/T.
- (b) First line maintenance echelons must be re-organized on a more mobile basis.

6. If it is accepted that the most important rôle of the Light Tanks will be with the Army Cavalry, commencing from the very outset of a campaign, it is clear that a very high standard of tactical co-operation between the two arms must be reached and maintained in peace.

It seems obvious therefore that the only way in which this can be achieved is by including a Company or Squadron of Light Tanks as an integral part of a Cavalry Brigade in India, as were the Horse Brigade Machine Gun Squadrons in the great war. Whether the Light Tank unit should be Cavalry or Royal Tank Corps hardly comes within the terms of reference of this paper.

BRITAIN'S CUSTOMERS.

BY MAJOR H. G. TRANCHELL.

One of the causes of the Financial Crisis in Great Britain during the Autumn of 1931 was the adverse balance of trade, which meant that Britain was importing much more than she was exporting. The consequence was that Britain was being drained of gold to pay for her imports, because her exports were inadequate for the purpose. It was in order to check this over-development of imports that Britain went off the Gold Standard and a little later abandoned the policy of Free Trade and introduced a system of tariffs. The *Glasgow Sunday Post* has recently published some statistics under the heading "Our Customers Good and Bad", showing the figures for imports and exports for 1931 and 1932 according to countries.

A study of these figures is particularly instructive. They show at a glance the position of British trade with each unit of the Empire and with each foreign country and bring home very forcibly the serious position that was then facing the country. In order to make the position even clearer, the figures as given in the statistics have been rearranged so that the reader may see those countries which buy more from Britain than they sell to her, her "good customers"; the countries which make purchases from Britain reasonably close to their sales to her, "her moderately good customers"; and finally those countries which sell to her far more than they buy, "her bad customers."

Britain trades with fifty-three foreign countries, of which only fourteen in 1932 bought from her more than they sold to her, and of these fourteen, only eight made purchases to the value of over a million pounds, namely :—

	1931.		1932.	
	Sold to Britain. £	Bought from Britain. £	Sold to Britain. £	Bought from Britain. £
China	7,773,074	7,858,615	6,202,662	7,778,068
Brazil	5,703,797	4,063,428	4,120,337	4,675,355
Iraq	705,113	1,242,118	423,940	1,975,902
Colombia	764,126	1,352,245	330,360	1,528,713
Yugoslavia	564,620	940,185	455,825	1,219,904
Siam	151,202	1,004,591	48,550	1,140,706

Next comes a group of eight countries whose purchases from Britain are very reasonably close to their sales to her. These countries are :—

	1931.		1932.	
	Sold to Britain. £	Bought from Britain. £	Sold to Britain. £	Bought from Britain. £
France	40,921,520	22,551,750	19,022,667	18,460,377
Italy	15,147,876	9,916,611	10,825,110	8,636,710
Japan	6,952,533	6,186,905	6,692,844	5,733,133
Portugal	3,309,273	2,454,939	2,888,622	2,584,150
Greece	2,026,357	3,179,021	2,330,201	2,177,340
Turkey	1,475,144	1,714,922	1,619,676	1,484,010
Mexico	2,397,003	934,004	2,430,510	1,088,643
Austria	2,729,792	1,317,918	1,087,204	944,550

The third group, those countries whose sales to Britain far exceed their purchases from her, are so numerous that it is best to divide them roughly into geographical groups.

Group A.—Scandinavia and the Baltic Litoral.

	1931.		1932.	
	Sold to Britain. £	Bought from Britain. £	Sold to Britain. £	Bought from Britain. £
Denmark	46,695,568	8,686,592	40,556,327	9,860,499
Sweden	17,342,035	7,743,767	13,424,817	6,887,322
Norway	8,630,233	7,559,388	8,252,767	5,804,003
Finland	11,630,127	1,603,658	11,736,684	2,263,024
Poland and Danzig ..	8,612,175	2,003,774	6,185,145	1,997,281
Latvia	2,927,537	590,712	2,667,430	590,568
Estonia	1,908,066	212,680	1,257,951	348,772

In this group Norway is the only country whose purchases are reasonably close to her sales to Britain, but in all the other Countries purchases lag a long way behind sales, specially so in the case of Denmark and Sweden.

Group B.—European Mainland.

	1931.		1932.	
	Sold to Britain. £	Bought from Britain. £	Sold to Britain. £	Bought from Britain. £
Germany	64,162,625	18,411,873	30,410,492	14,580,768
The Netherlands ..	35,198,580	13,701,514	22,000,951	12,107,608
Russia	32,285,563	7,291,319	19,697,013	9,274,534
Belgium	33,189,570	10,025,509	15,989,806	8,744,973
Spain	14,248,575	5,294,001	12,755,235	5,224,827
Switzerland	11,311,750	4,138,024	5,157,692	3,710,379
Roumania	3,412,441	1,333,342	3,464,646	1,757,034
Czecho Slovakia ..	6,619,588	1,337,443	3,036,874	959,847
Lithuania	1,487,692	300,866	1,896,866	392,755
Hungary	1,552,979	513,828	1,112,346	339,970

The figures for Germany, the Netherlands, Russia, Belgium and Spain all show a remarkable difference between sales to and purchases from Britain, and this difference is even more striking in the figures for 1931. The figures for 1932 show the effect of the British tariff in checking the immense flood of foreign imports.

Group C.—America, North and South.

	1931.		1932.	
	Sold to Britain £	Bought from Britain. £	Sold to Britain. £	Bought from Britain. £
United States ..	104,009,495	18,245,713	83,671,879	15,098,272
Argentine Republic ..	52,744,214	14,785,467	50,870,371	10,663,101
Uruguay	5,229,628	1,984,604	3,742,330	1,560,669
Peru	3,510,014	664,461	4,388,589	727,747
Cuba	4,292,075	665,821	5,335,764	695,101
Chili	4,482,578	1,932,479	3,859,425	661,889
Bolivia	2,278,771	170,118	1,879,573	194,218
Dutch West Indies ..	3,158,633	200,377	5,326,423	139,874
Cost Rica	2,284,834	135,021	1,343,809	138,778
St. Domingo	1,019,166	103,938	1,717,454	97,516

The figures of this group are the most remarkable of all. We see the United States and the Argentine Republic both with enormous gaps between their sales to Britain and their purchases from her. Healthy trade cannot exist when the United States sell eighty-three million pounds worth of goods and only buy fifteen million pounds worth in exchange. And then at the other end of the scale are countries that sell over a million pounds worth of goods to Britain and do not even buy a quarter of a million worth from her. It is not surprising that Britain could not indefinitely stand the strain of such an inequitable arrangement. Had it not been for Britain's "invisible exports," the crisis would probably have come much earlier.

One small group remains.

Group D.—Near, Middle and Far East.

			1931.		1932.	
			Sold to Britain, £	Bought from Britain. £	Sold to Britain. £	Bought from Britain. £
Egypt	..	..	10,841,942	6,656,427	10,406,455	6,513,002
Java	..	..	4,556,001	2,506,721	4,745,375	2,458,361
Persia	..	..	5,791,368	727,443	6,979,205	826,967

The figures for Persia show a very glaring difference between sales and purchases.

Though these figures disclose in all its nakedness a very deplorable state of affairs, good has come out of the evil. The crisis drew public attention to the lopsidedness of British trade, and as a result, a National Government was formed, which has adopted a system of tariffs, a change of policy which party rivalry would never have permitted in more normal times. It will be remembered that Joseph Chamberlain's championship of a policy of Tariff Reform was one of the main causes of the Unionist party being swept from power in 1906.

Now that tariffs have been instituted in Britain and the Government has the power to protect itself from its bad customers, it is interesting to note that already six trade agreements have already been signed within the last few weeks:—those with Germany, Denmark, Norway, Sweden, the Argentine Republic and Iceland. The figures for Iceland have not been included in these tables because her trade

with Britain is very small, not amounting to quite half a million pounds per annum.

When we turn to the British Empire we find that of fifty countries twenty-nine bought in 1932 more from Britain than they sold to her, but of these only eight bought goods of over one million pounds value. These are :—

Group A.—

	1931.		1932.	
	Sold to Britain. £	Bought from Britain. £	Sold to Britain. £	Bought from Britain. £
India ..	36,711,288	32,288,759	32,314,548	34,091,397
Union of South Africa ..	13,120,251	21,856,810	15,529,679	18,109,396
Hong Kong ..	406,335	4,435,340	245,510	4,818,366
Straits Settlements ..	5,391,218	4,810,946	3,870,840	4,725,602
Nigeria ..	3,364,847	3,731,842	3,767,165	4,381,864
Channel Islands ..	3,486,712	3,510,024	3,876,794	4,034,731
Gold Coast ..	1,290,992	1,952,687	1,485,647	2,661,739
Malta and Gozo ..	43,199	974,292	37,617	1,004,677

After this comes a group of eight countries whose purchases from Britain are reasonably close to their sales to her.

Group B.—

	1931.		1932.	
	Sold to Britain. £	Bought from Britain. £	Sold to Britain. £	Bought from Britain. £
Irish Free State ..	36,546,967	30,511,122	26,530,856	25,774,025
Jamaica ..	2,414,542	1,505,265	2,961,135	1,871,113
Trinidad and Tobago ..	1,450,453	1,266,800	1,608,348	1,401,124
Kenya ..	2,115,734	1,767,878	1,761,395	1,326,981
Palestine ..	1,413,843	793,783	1,558,660	1,304,263
Southern Rhodesia ..	996,165	1,476,884	1,297,813	1,208,353
Federated Malay States ..	1,061,556	1,470,576	933,942	931,106
British Guiana ..	577,820	814,313	1,093,224	905,310
Tanganyika ..	445,468	665,004	701,365	421,748

The third group consists of those colonies whose sales to Britain far exceed their purchase from her, and it includes some very important units of the Empire.

Group C.—

		1931.		1932.	
		Sold to Britain. £	Bought from Britain. £	Sold to Britain. £	Bought from Britain. £
Australia	..	46,679,237	14,527,871	47,192,719	20,025,065
Canada	..	32,840,526	20,550,612	43,145,829	16,408,483
New Zealand	..	37,775,155	11,196,327	37,484,785	10,360,214
Ceylon	..	11,996,189	2,707,752	10,352,564	2,486,251
Newfoundland and Labrador		2,029,326	542,834	2,606,542	648,967
Sudan	..	997,201	736,779	2,835,036	584,759
Mauritius	..	1,683,921	442,201	2,166,626	414,707

The figures for Australia, Canada, New Zealand and Ceylon are decidedly impressive, and show how great an effort is needed on both sides if British trade with them is to become healthy once more. The figures for the Empire are for the calendar year 1932, and so do not show the results of the Ottawa Conference upon British trade.

Naturally there are any causes for these large gaps between the sales and purchases of certain countries to and from Britain; in some cases it is due to an exchange very unfavourable to Britain, and in others it is due to a failure to hold the markets, but primarily it is due to that curious modern spirit of nationalism which animates so many countries and under the influence of which they wish to be self-supporting, so that while willing and wishing to sell their own goods abroad they are loth to buy goods from foreign countries. This spirit of nationalism if allowed to develop will be productive of very serious rivalry some day between the various nations, more especially between those who have gone in extensively for industrialisation. The alternative is to reorganise the trade of the nations and arrange a partitioning of markets. But that is a subject outside the scope of this article, though actually such discussion leading to the establishment of economic spheres of influence has already been mooted as between Japan and Britain.

The outstanding lesson of these figures is the magnitude of the effort needed to bring Britain's exports into a nearer and more reasonable relation to her imports.

REMOUNTS.

By "HORSE COPER."

The object of this article is to give a brief account of the operations of the Army Remount Department in India in peace time, and to explain how animals required for army purposes are procured and supplied.

General.

The Remount Department is responsible for the supply of all army animals, with the exception of carrier pigeons. With the progress of mechanisation, bullocks and camels, which figured to some extent in our transport until a few years ago, have now almost disappeared as regards peace requirements, though both would be required again in a war of magnitude. Elephants formerly used for hauling heavy guns and for work such as bridge building, now appear no longer on army returns, the last elephant on the strength having been disposed of by sale in 1932. The main requirements in animals at the present time are, therefore, horses and mules.

Horses.

The number of horses of various types on the peace establishments of the army, excluding officers' chargers, amounts to over 23,000. They are issued to the service at about five-six years of age and their service life normally comes to a close at about fifteen years of age, although in exceptional cases some horses are fit for retention until they are twenty years old.

Casualties amongst horses at younger ages naturally also occur, and reduce the average service life of a horse to rather less than nine years. Based on this average, it is found necessary to calculate on 12 per cent. per annum as the percentage of annual replacements of horses required to maintain efficiency, giving an approximate number of 2,750 remounts required for issue to the service each year. The various categories of horses are given below.

(i) Light Draught.

These are employed in both Horse and Field Batteries of the Royal Artillery. In view of the differing nature of the duties required from these two branches of the Artillery, there is a separate classification in Remount Depots for each class.

Horse Artillery, being required to move with Cavalry, require a horse capable of greater speed than Field Artillery. In former days, when carriages and coaches were extensively employed in all countries where roads were available, horses suited to the needs of the Horse Artillery branch were bred in large numbers in Australia, and were easily procured. It is now a matter of considerable difficulty to get the right type of horse for this branch of the service from Australia or any other country, the demand for such horses having disappeared with the increase of mechanical transport. The problem of providing the slightly heavier horse required for Field Artillery is not so acute, as horses are still utilised extensively for farm work in Australia, and the lighter type of farm horse is that which has been found best suited to the requirements of this branch. A number of light draught horses are also employed in Signal and Engineer units. These are of the same type as those supplied to Field Artillery. All Draught horses required for the army are imported from Australia.

(ii) Riding Horses.

These are sub-divided into Rides, Class I, and Rides, Class II. Rides, Class I, are the type formerly known as British Cavalry and Artillery Riders.

The stamp of horse desired is the well bred horse of hunter type, from 15.0 hands to 15.3 in height, with sufficient substance and bone to enable him to carry a man with full equipment for long distances at a reasonably rapid pace.

Rides, Class II, comprise the horses formerly known as Indian Cavalry Rides, and form the greater proportion of the animal requirements of the army in horses. They are smaller and lighter in type than Rides, Class I, averaging slightly over 15.0 hands in height. These rides are supplied to Indian Cavalry regiments, Signal and Engineer units. Ten for each Battery are also authorized for Horse and Field Batteries. Rides, Class II, receive a lower ration and Australian horses of this type cost about £12 a head less than Rides, Class I.

(iii) Riding Ponies.

These are also of two types, divided into classes I and II. Class I, Riding ponies, are issued to Mountain Batteries as riders. Class II, Riding ponies are mainly required by the I.A.S.C., to mount the men who accompany animal transport units.

Mules.

The categories of mules are as follows :—

(a). *Light Draught Mules.*—These are considered as interchangeable with Light Draught horses and are utilised for identical duties.

(b). *Mountain Artillery.*—These are sturdy mules up to great weight for use with Light and Pack Batteries, where the pack loads are necessarily heavy.

(c). *Equipment Mules.*—These are required for Signal and Engineer units and for machine guns and 1st Line Transport of the Infantry.

(d). *Army Transport.*—There are two types under this heading, styled Draught and Pack respectively.

The number of mules on army strength is over 22,000.

Production of horses and mules in India.

The horse and mule supply of India is intimately connected with military requirements. Were it not for the stimulus and support extended to horse and mule breeding operations by the army, the breeding of horses and mules in any appreciable number would speedily languish and dwindle to a very low ebb, except for the production of the small ponies which ordinarily provide the economic requirements of the country.

The object of horse and mule breeding from a military point of view, is to make the country self-supporting as far as practicable, and to ensure that reserves are available in the country in time of emergency.

It is economically unsound to import animals from other countries when they can be produced in the country where they are to be utilised, added to which such importations decrease the wealth and development of home resources. The greater the demand in peace, the greater the supply in war. It should, therefore, be a settled axiom of our policy to increase the numbers purchased in India and correspondingly to reduce the importations from overseas. The Indian bred remount is admittedly more expensive than the Australian, as it is necessary to rear him in a somewhat artificial manner, but the expenditure thus incurred is disbursed in this country, and a further justification for the moderate expenditure on horse and mule breeding is to be found in the large numbers of horses purchased in India during the War of 1914—18.

During the war period over 50,000 horses and ponies were bought and the advantages of being able to procure them in India, as compared with importation of a like number from overseas, proved inestimable. These horses required no acclimatisation, no shipping at a time when shipping space was of vital importance, their purchase money was retained in the country and their price was considerably lower than that of any imported horses.

The system of producing horses and mules for army requirements in India is detailed below.

The Government of India, in certain selected Districts, controls the breeding of horses and mules. Horse and donkey stallions are provided by Government, the mares are owned by horse breeders. There are two systems of breeding known as "bound" and "unbound" respectively. In the "bound" Areas men—selected as likely to prove good horse breeders—receive an allotment of land on condition that they maintain a mare of approved type for breeding purposes.

The "bound" Areas are the Shahpur Area, the Montgomery Area for horse and mule breeding and the Chenab Area for mule breeding with headquarters at Sargodha, Montgomery and Lyallpur respectively. Officers designated District Remount Officers are in charge of each Area. Horse breeders in "bound" Areas receive free services of stallions for their mares, and are required to conform to certain rules designed to ensure production of suitable remounts. They are required to keep their mares and foals in good condition, to produce them for inspection when necessary and to sell the young stock to Government, if suitable for army requirements, up to the age of 18 months. They are permitted to dispose of those which prove unsuitable as they wish.

The "unbound" areas are Rawalpindi, Chenab (horse breeding only) and Meerut. In these areas a branding fee of Rs. 10/- is taken by Government entitling approved mares to the services of Government stallions without further charge. Government has no lien on the young stock produced in these areas, though in practice suitable stock are always purchasable at Government rates, which in all areas is an average maximum of Rs. 230/- for young stock horses and Rs. 120/- for young stock mules.

Young stock, as purchased, are despatched from the horse and mule breeding Areas to the Remount Depôts at Mona and Sargodha,

whence they are issued to the service as they arrive at maturity. The total numbers of horse and mule stock held at these depôts average from 3,500 to 4,500 of various ages at each depôt. The acreage of each depôt is 10,000 acres. The stock produced in each Area are branded in order to facilitate recognition. These brands will be found on the off shoulder of each Indian bred horse or mule and are given below—

Shahpur Area	..	..	S
Montgomery Area	..	..	M
Chenab Area	..	..	C
Rawalpindi Area	..	..	P
Meerut Area	..	..	U

On the near-shoulder will be found the brand of the depôt at which the horse or mule has been reared.

For Mona this brand is	..	..	M
			↑

For Sargodha the brand is	..	..	S
			↑

Horses and mules may be reared at either depôt, irrespective of the Area in which they have been bred. They are classified to those branches of the service for which they are considered suitable, on approaching maturity.

Supply of Horses from Australia.

All draught horses and a proportion of Rides, Classes I and II, are imported from Australia. No draught horses are bred in India, as, owing to the fact that they are not employed in agriculture in this country, there is no market other than the army, for horses of this type. A proportion of the annual requirements of rides are also imported from Australia. This proportion is based upon the number of Indian bred horses available for issue to the army each year. The average number varies but works out at approximately 50 per cent. of each breed.

The Australian horse is in general well suited to the needs of the army in India, although a period of acclimatization is essential before he can be considered fit for serious work. There are several reasons which render a period of very light work essential during the early stages of his army career.

(1). The voyage from Australia, which may extend to six weeks of enforced inactivity, and which in many cases adversely affects the feet and condition.

(2). *Change of rations.*—The Australian horse, reared under normal conditions, is unaccustomed to any form of ration other than grazing until placed on board ship for the voyage to India.

(3). *Change of hemisphere.*—This change affects the growing of the winter coat, summer in Australia coinciding with the winter in India. Australian horses have, therefore, to adjust themselves to a complete change of the seasons of the year, before they can be considered fit.

The procedure governing the importation of horses from Australia is indicated below.

After the number of horses required for the ensuing year has been determined and Government sanction has been accorded to their purchase, commissions are issued to certain contractors, styled Government shippers, in the month of May. The number of these shippers is at present nine, of whom seven bring their horses to Calcutta, and two to Bombay. In the commission form issued to each shipper, the number of horses of each class required from him is specified, together with full details as to the type which will be accepted. The numbers allotted to each shipper vary according to the quality of the horses imported by them during the previous season. In order to ensure that they will be in a position to complete their Government order, after elimination of the horses not accepted by the purchasing officer, shippers bring over to India a percentage of additional horses, varying from 20 per cent. to 40 per cent. above their order.

The Government shipper in Australia, on receipt of a cable from the Quartermaster General in India, proceeds to collect horses in compliance with his order, after considering his assets already in hand. No shippers wait until they receive their yearly commission, but, as soon as they return from India they commence to collect their remounts for the following season. The procedure employed entails attendance at the important sales in localities where suitable army horses are produced for sale. At these sales a proportion of their requirements are purchased but his method of purchase requires considerable skill and experience. The horses are railed in trucks from up country stations to the sale centres, practically unhandled by man, turned into sale yard paddocks and thence run into the sale ring, through which they pass very rapidly, being kept well on the move. There is no guarantee except as regards age. Height, action and general suitability must all

be considered by the buyer, during this brief and animated passage through the sale ring.

At the conclusion of the sale the shipper is certain to find, when going through his purchases, that he has collected a percentage of horses unfit for shipment to India, which he then proceeds to eliminate, always to his financial disadvantage. The purchases approved of are then branded, grazing is hired in suitable localities and the horses remain at the shippers risk and expense until the time of shipment to India.

Another method of procuring remounts is to visit a station where horses of the types required for army purposes are bred. This method is subject to previous arrangement with the station owner, as, on the large stations, it may take as much as three weeks to muster from the outlying portions of the run, a draft of horses of suitable age for sale.

On the arrival of the shipper, on purchasing bent, he is shown one or more paddocks of horses of the right age for shipping, *viz.*, four to six years. He is then invited to purchase the whole batch at a fixed price, and the policy of selection of suitable horses only is not viewed with favour by the seller. Where it is agreed to, horses are only sold under such arrangement at a higher price. Facilities for thorough inspection are very scanty and purchase by this method also results in a percentage of unsuitable horses being acquired, which involves loss when they are disposed of.

There are in Australia a few dealers who specialise in the Indian horse trade and collect horses at their yards for sale to Government shippers. These men are, however, in pursuit of their trade, confronted with the difficulties already explained. In order to cover their losses, due to the purchase of a proportion of unsuitable horses, they find it necessary to demand a comparatively high price for the horses selected by shippers from their mobs.

From the foregoing it will be realised that the Government shipper has none too easy a task in procuring horses up to Remount standard, particularly as the percentage of the total number of horses in Australia, up to peace standard of army requirements, is estimated at well below 5 per cent.

Shipments of horses arrive in India, as steamer freight is procurable from Australia, between the end of October and the middle of January. Horses arriving in Calcutta are disembarked at Kidderpore Dock,

which adjoins the Government Remount Depôt at Alipore. After landing they are given a week's rest in paddocks in the depôt to give them an opportunity of partial recovery from their enforced inactivity on the voyage. In Bombay they are accommodated in yards belonging to Messrs. Gove, as there is no Government Remount Depôt. Horses are embarked at various Australian ports, and it frequently happens that a ship designed to carry the normal number of 600—700 horses will pick up some at Adelaide, more at Melbourne, and a further consignment at Gladstone or Townsville before the voyage to India is actually commenced. The horses shipped at Adelaide will have been on board for five-six weeks before the arrival of the steamer in Bombay or Calcutta.

Voyage casualties vary considerably being dependent on weather conditions. The average losses last season amounted to about 0·86 per cent. of deaths on the voyage. Shipping is normally arranged by the British India Steam Navigation Company, and is a matter for private arrangement between the shipping company and the shippers of horses, with which Government has no concern in peace time.

Apart from other considerations affecting the horse trade to India, the financing of these operations demands heavy capital outlay. The shipper has to provide, without receiving any advance from Government towards meeting this liability, the purchase price and all incidental expenses such as feed and keep and rail movements of horses until the time of shipment from Australia.

His disbursements are not recouped until he sells his horses to Government after arrival in India. The only concession given to shippers is that the freight due by them to the shipping company concerned is advanced as soon as the horses have been landed in India.

Shortly after landing in Calcutta or Bombay the shipper selects his best conditioned horses and shows them to the Remount purchasing officer. Horses accepted are taken over by Government and despatched to Remount Depôts for acclimatisation. This procedure is varied in the case of Indian Cavalry regiments, which receive a proportion of their remounts annually from the port of purchase by direct transfer.

Importations from other Countries.

Apart from Australian horses the only army animals normally imported from overseas are topload mules for Mountain Artillery and Light Draught mules. It has been found impossible to produce

these types of mules in sufficient numbers in India, as there are very few draught mares in this country from which this powerful type of mule can be bred. The exceptions are the imported draught mares at six studs in the Punjab, from which a proportion of our requirements are now being procured. The balance of Light Draught and Mountain Artillery mules to meet our requirements are imported from North America annually.

Equipment mules are bred in India and are all found from the Remount Depôts at Mona and Sargodha, where they are reared. Transport mules are supplied, to the extent available, from the same sources as equipment mules. The greater portion are, however, purchased from dealers in the Punjab by an officer detailed for mule purchasing duty during the cold weather each year.

Chargers.

Regulations in India do not provide for the supply of free chargers to officers as in the United Kingdom. This has been the policy of the Government of India from the early days of its armed forces. Many schemes have been under consideration during the past few years with the object of providing chargers at less cost to the officer, approximating to the Home system. Financial considerations have hitherto rendered this measure impossible.

An officer holding an appointment for which a charger is laid down as necessary, is, therefore, required to provide himself at his own expense with the charger or chargers considered essential for the performance of his duties. He receives from Government an allowance styled syce and forage allowance which is estimated as providing the pay of a syce and grain and fodder for the charger. No allowance is admissible for shoeing, clipping and other incidental expenses.

Chargers may be purchased privately in the open market or by purchase from Government. In the latter case they can be selected either from a Remount Depôt or from the ranks of a unit. Payment for horses purchased from Government is recovered by monthly instalments deducted from the officer's pay. The price paid is fixed according to the rank of the purchasing officer, and is a concessional rate fixed at less than the issue cost of the charger. It is necessary for officers either to select their chargers themselves or to depute some person to do so on their behalf.

Officers commanding Remount Depôts are prohibited from accepting the responsibility of selecting chargers. The reason for this rule

is that, before it was operative, complaints were received as to the unsuitability of chargers selected by *depôt* commanders, coupled with a demand that the rail freight expended on the removal of the charger from *depôt* to home station should be refunded either by Government or by the officer responsible for the alleged faulty selection.

The officer who wishes to select a charger, having submitted his indent, arrives to make his choice at the nearest Remount *Depôt*. The methods adopted by officers are necessarily somewhat varied. Generally speaking these methods fall into one of three categories:—

(a). That adopted by the officer who knows what kind of a horse he requires, and sets about the business of selecting a horse suited to his requirements.

(b). That of the officer with little or no experience, who states his requirements to the *Depôt* Commander, asks for advice to help him to a suitable choice and accepts the advice tendered.

(c). That adopted by the officer with or without experience, who entertains deep suspicion of the *Depôt* officers, and who, if he asks for advice, normally rejects it and selects another horse. Selectors of this category occasionally accuse the Remount Department of having "struck them with a dud."

It will be understood that the Officer Commanding a Remount *Depôt*, who has nothing to gain from providing officers with unsuitable chargers, welcomes the arrival of officers in the first two categories described above, and that he derives but little pleasure from his duties in connection with those in category (c), who comprise fortunately a very small minority.

Selection being completed by one or other of the methods set forth above, the Veterinary officer then examines the charger for soundness, and the purchasing officer is informed of any unsoundness which may be detected at that examination, before the charger can be removed.

Some amusing cases have occurred which illustrate the proverbial suspicion harboured by those who deal in horse flesh.

In one case an officer, ten weeks after removing a charger selected by him from a Remount *Depôt*, submitted an official complaint to the effect that, whereas he had selected a mare, the charger sent to him proved to be a gelding. This discrepancy of sex, which had apparently escaped his notice for some time, proved on enquiry, to be an unfounded accusation.

In another case, an officer brought his syce with him, pointed out the charger which he had selected and told him that he was to remain with the charger until the time of despatch, and that he was to permit no substitution! These directions were given in the presence of the Officer Commanding the dépôt.

Another officer brought with him a decrepit old gentleman, believed to have been his syce. After the Veterinary Officer had completed his examination of the selected charger, the purchaser instructed the syce to examine the horse in order to confirm the accuracy of the veterinary examination. This was carried out with due solemnity, and doubtless with much resulting benefit.

The price paid by the Government of India for chargers is identical with that of troop horses. Chargers are, therefore, a selection of the best remounts. In the United Kingdom considerably higher prices are sanctioned for officers' chargers.

It is, nevertheless, a fact that many prizes at Horse Shows in India are won every year by chargers purchased from Government and many of these are playing high class polo in this country, and providing excellent hunters and pigstickers. The number of chargers purchased yearly by officers varies from two to three hundred.

Some hard cases necessarily occur when such numbers are dealt with. A small percentage, sound at the time of purchase by an officer, do not long remain serviceable. Such misfortunes are not confined to purchases from Government, but occur also in the case of horses procured from other sources. This must be regarded as one of the chances incidental to transport of all descriptions, not excluding second hand motor cars. In other cases horses fail to train on and to become suitable for the work required of a charger. This may be due to the horse or again to the methods of training, which are liable to prove unsuccessful when both the rider and the horse require simultaneous instruction.

Purchase of Horses and Mules.

This is the most difficult operation included in the varied duties of officers of the Remount Department. Anyone who has ever purchased animals in large numbers, knows well that there is no difficulty whatever in buying a good horse or mule which has no faults of conformation or action. Such equine paragons are, however, rarely met with, and, if purchasing operations for the army were restricted solely

to this desirable type, the duties of purchasing officers would be simple, interesting and pleasant.

A well wisher of the Remount Department, who desired to preserve his anonymity, wrote to the press not long ago, and described Remount officers as those who were able to estimate how bad a horse could be issued to the service. This somewhat harsh dictum contains a considerable element of truth. If purchasing officers rejected every horse which was not of the highest type, the Australian shippers would not survive one season without bankruptcy, and horse breeding in India would suffer a set-back from which it would not recover.

The sole criterion of fitness for purchase of horses and mules must be, not a pleasing outline and absence of any faults of conformation or action, but a deliberate decision as to whether such faults as may exist, constitute a bar against efficient military service. The Remount Department have a large number of customers with varying tastes in their clientele. Complaints are frequently registered; satisfaction not so often voiced. Some of their customers have sufficient expert knowledge to realise the difficulty of providing animals which will meet with approval, others have none. These latter are often loudest in their condemnation of animals issued to their unit.

Constant endeavours are made to improve the quality of army animals but one thing is certain, and that is that in India, as in all other armies, there will always be a percentage of horses and mules which units do not like, or in alternative, if these are eliminated, there will be deficiencies in animal establishments. Remounts which will receive universal approval will never be procurable in sufficient numbers to meet the large requirements of an army of appreciable strength.

TEST IMPRESSIONS IN AUSTRALIA.

BY "CHARGER."

It has been said, both in England and Australia, that too much has already been written about the Tests and some of it has caused a certain amount of dissatisfaction in both countries. Judging by extracts from the English papers which have been reproduced in Australia it would appear that English people have not been given a true picture of the Australian attitude towards sport, or that Australians are being purposely misinformed of English opinion by incomplete and often highly derogatory quotations from the English press. The purpose of this article is not to discuss the question of "leg theory," but to endeavour to show that the Australian is as equally appreciative of talent, although somewhat more demonstrative, as the rest of the sport-loving British public.

Cricket is intensely popular in Australia, much more so than at home, where a great proportion of the population never get a chance to play at all and are consequently disinterested in the game. Barracking plays a great part in all Australian sport, as it does in professional football in England, and there will always be a section of the crowd which will carry it to unpleasant extremes. This is not peculiar to Australia, but is seldom extended to cricket at home on account of the lack of interest in the game shown by the more violent section. Extremists are equally unpopular on both sides of the world.

Having been in Sydney for six months and read their papers, seen most of the two Test matches played there and discussed with numerous Australians the question of leg theory, I have come to the conclusion that the greatest harm was caused by sensational journalism. "Body line bowling" was a phrase coined by the Australian press, the result of which was to misrepresent leg-theory tactics to a certain section of the public. Photographs were reproduced of popular Australian cricketers showing where balls had struck them during an innings and pointing out that this was normal in "Body line bowling." What they failed to state was whether these blows were all landed during the leg theory field or whether it is unusual to be struck when the bowling is confined to conventional attacks. Oldfield being struck in the third Test was regarded as a natural result of leg theory.

Hammond was also struck in the face in the following innings, but this incident was not mentioned by the papers giving prominence to "Body line bowling."

Again, small incidents during games were enlarged to alarming proportions and reported at great length. Such was the "Resin Sensation" which gained the main headline and an exclusive half-column on the front page of a daily paper. "Not Cricket-Woodfull's Accusation"; another headline right across the page in the next publication, followed the next day by the Board of Control's cable of protest to the M. C. C. It was reported in one paper that Woodfull expressed regret to Warner for his outburst, but this was emphatically denied in another under headlines recorded as an official statement. Such startling headlines, whilst being amusing to certain people, cause a lot of sensation which finds its outlet in extreme barracking.

Such reports fade into insignificance when compared to the publications following "Larwood's unjustified attack" printed in a Sunday paper in England. One Australian paper devoted a half-page headline to "Dissension in Jardine's team," under which it was maintained that during the team's travels in Australia this dissension developed into cleavage of friendships and disunion. In the two and a half columns it was claimed that Mitchell wanted to return home, Tate did not throw a glass of beer at Jardine but did throw many words, Larwood obliterated his name from the list of players at Bendigo, expressing anger at being shown as twelfth man and was finally "able to call the tune and Jardine and the Managers deferred to him," Pataudi was annoyed at not being given the Royal room which was claimed by the Manager, Palaret: Brown was unhappy, Larwood was jealous of Allen, Pataudi was hurt because he was omitted from three Tests and let fall "sarcastic remarks in all manner of places and before mixed audiences" and, finally, that Sutcliffe passed sarcastic remarks to the umpire on the size of ball in the first Test. Perhaps the most astonishing passage of the whole report is that Jardine went up to Larwood after Woodfull had been hit over the heart in the third Test and said "Well bowled, Harold." This is almost equalled by the report of an English player going up to Larwood when Bradman came in to bat saying "Don't wast time! Let him have it straight at him." Such statements reported in a widely circulated paper show a definite abuse of the privileges conferred on the press and must do a lot

towards increased animation on the part of extremists. It is obvious to all who followed the way the team faught together through every Test that such statements can have no foundation whatever in fact.

I suppose that Larwood's untimely outburst was deplored much more in England than in Australia. It is a pity that, having returned to England, Larwood could not have preserved that silence which was so much to be admired in every other member of the team. Larwood was not universally regarded as an unpleasant cricket character. Here is a quotation from one Australian paper:—

“If I were choosing a world team to play Mars I would invite Jardine to be Captain. And I have an idea that Jardine would accept the invitation provided Larwood too were asked to make the trip. I shudder to think what would have happened to England yesterday had Larwood gone fishing or golfing or something. To me he appeared the only bowler on the side.” Later on it gives “a word of appreciation to the world's greatest bowler.”

So much for Australian journalism. It is a comforting sign that these sensational outbursts did not find an echo amongst the majority of the public. Leg theory was freely discussed and feeling is as mixed as in England. It is not a new method of attack, but must be far more difficult to play as bowled by “The Larwood Express” than by previous exponents. It led to what appeared from a spectator's point of view to be anticipation on the part of certain Australian batsmen before the ball left Larwood's hand, and nearly resulted on several occasions in them ducking their heads into the ball. Players frequently stepped right across the wicket to play a perfectly straight ball and were bowled. The Oldfield incident has been shown in slow motion at many theatres and the film was taken in a direct line with the two wickets. This ball was pitched outside the off stump and Oldfield stepped across, saw the ball coming straight for him and ducked, showing what appeared to be double anticipation. An Adelaide taxi driver said to me “They can put what they like in the papers, but I could see in a direct line with both wickets and it wasn't Larwood's fault.” He then proceeded to describe the incident much as I have explained it above.

Before the first Test match the Sydney public had not seen leg theory in practice as bowled by the English team and the term “Body line bowling” had not come into universal use. I don't remember

hearing it until after the second Test when it was used by certain papers to the practical exclusion of "leg theory." The crowd therefore, or the barracking section, had nothing particular on which it could focus its attention and energies. Barracking was common, but kept within reasonable limits. One or two remarks called for deprecatory murmurs from the more tolerant section of the public, but generally speaking it was an extremely well behaved crowd. I heard much more tense barracking in Melbourne when the M. C. C. was playing Victoria before they came to Sydney. The slow batting of the Englishmen during their first innings in the first Test at times deserved a more often received a little "gingering up," especially Pataudi's last forty runs for his century.

There is a small portion of the spectators which will never be satisfied. If the scoring is fast they advise the Captain to give the ball to someone else. There is always some unfortunate who must form a butt to receive their remarks, so very seldom approaching politeness. They don't come along to watch cricket; they want to see their side win and to do their best to put their opponents off their game. In spite of this section being small in comparison to the rest of the crowd it is a loud-voiced collection of enthusiasts who have no trouble in making themselves heard. Amongst them are a number of spectators who have no ideas of their own, but spend their time in echoing the expressed sentiments of others just to be able to hear their own voices. In this way it much resembles a football crowd at home which groans at the mistakes of their own team and laughs at those of others.

The fifth Test gave them great scope for their energies and they made the most of it. With the Ashes won and lost it was surprising to see so much enthusiasm in the game, but the reason must have been that it either made England and Australia all square in Test wins or Australia would come out two to the good. The ground was crowded each day and it was difficult to get a patch of grass to sit on, even on the famous "Hill," which is the home of barrackers. Once secured it meant staying there for the day or you ran the risk of losing it when you went away for lunch. Hope for a sandwich man to come round and an occasional visit from an ice cream vendor was the only certain way of comparative comfort. People walk over your legs, tread on your fingers and park their overripe grapes in the hole you have dug for your elbow. Your hand, seeking an alternative resting place, finds a smouldering cigarette-end, and it is a case of

keeping your eyes moving between the game and your immediate surroundings.

The Test was a tale of dropped catches. With Australia batting four batsmen were given two innings and two of these had even three lives before they were finally dismissed. These were not possible "lives," but would have been certain catches with normal Test fielding. The first dropped catch was bad luck, the second a coincidence, the third a joke, the fourth a scream, the fifth, sixth and seventh were greeted with roars of delight and called for many caustic remarks from the crowd. After that it became boring and not even the most hardened barracker could think of anything new. Larwood was the greatest sufferer, six catches being dropped off his bowling, whilst Allen saw three of his catches carefully placed on the ground and Hammond, one.

It was, however, much the same during the Englishmen's innings. Jardine, never comfortable, was twice dropped and so was Hammond. Stan McCabe, the local hero, was an offender in both cases. In spite of his universal popularity he could not escape the barrackers and a loud voice carried above all the noise requesting Woodfull to "Put him on the boundary," immediately followed by a counter-suggestion to "Put him on the dole."

It was in this Test that Larwood made his great and sparkling knock of 98 which was thoroughly appreciated by everyone. It was a good, hard-hitting innings such as is seldom seen in modern Test cricket and an innings with few technical faults. In the last over bowled to him Larwood hit a six, a four and two twos. This brought him to 98 and he had decided to drive the next ball through the covers, but changed his mind at the last minute and pulled it round to long-on; Ironmonger, the veteran player who can't run and stops a ball with his foot rather than stoop to it. Whilst the ball was travelling through the air everyone leant forward and shouted "Drop it: drop it, you blighter." But Ironmonger was one of the few Australians who held an offered catch in that innings. The ovation given Larwood as he walked to the pavilion could not have been excelled had it been Bradman completing a double century. Larwood was the hero of the day and the write-up he received in the papers should have gone a long way to make him forget the unpleasant treatment previously accorded him. Hammond's century was a matter of secondary importance.

The one really unpleasant incident during the final Test was when Jardine was jeered and "counted out" for complaining about

Alexander digging up the wicket when bowling. When Jardine was hit by a fast ball a little while later and was obviously in pain the incident was greeted with cheers. No sane community could ever be induced to believe that this was an echo of the feelings of any but a very small minority of the spectators; and statements, therefore, to the effect that this attitude is universal cannot be expected to mend an unfortunate breach which had occurred in cricket relations, but should be condemned as extreme and highly exaggerated.

The "Hill" is blamed for every unpleasant remark and it is to the Hill that one must go to learn the true feelings of the crowd. The Hill extends round one complete half of the Oval from directly behind one wicket to behind the other. Scattered right round this large semi-circle are cricket fans whose one desire is to make a noise. But for every one of these there are hundreds who wish to see the game played and, when barracking goes beyond the limits of decency, will request the perpetrators to "cheese it" or "chuck it" or "dry up." Now these have no desire to make a noise greater than will carry across the distance separating them from the object of their remarks. So it is easily understood that spectators in other areas and players on the field gain the impression that the Hill is one hundred *per cent.* hostile. There were spectators seated near me, and I'm sure on other slopes of the Hill, who were so disgusted with the continual barracking that they made a point of applauding every run-scoring stroke made by the Englishmen, and in general showed their sympathies to be with the visiting team—as a mark of protest.

The Tests finished and the M. C. C. team departed, the greater majority of people in Australia were content to forget all about "Body line bowling," and would have given a lot for the question never to have been referred to the M. C. C. but to be allowed to work out its own solution. Why was it necessary to write articles in Sunday papers, why write books on the question, why write this article? Everyone is trying to give their own impression and they must all be restricted in their scope. Isolated cases are always misleading so, let us generalise by taking the good into account with the bad and by maintaining that, although there may have been faults on both sides, the game is the only thing that matters to sportsmen.

Jardine did not enjoy the popularity enjoyed by previous English Captains, but this was due, I think, to his naturally retiring disposition. He was recognised as one of the finest Captains ever sent with a team.

Larwood was a hero and his talent recognised by all. Every time he appeared on the screen in Test match scenes he was applauded and cheered. Shown in slow motion after the departure of the team, in order to give the public an idea of leg theory, he was cheered and clapped although shown in the scene where Oldfield was injured, whilst the producer, Arthur Mailey, in introducing the film was greeted with silence.

Herein lies the fault—an improper impression created by certain newspapers, perhaps in both countries. Sometimes incomplete and often highly exaggerated accounts of incidents just for so much “copy” and an additional write-up. What must be remembered is that, although Colonies are widely separated, they and the Mother Country are still British in outlook and at heart. The feelings of one part of the Empire are bound to find an echo in other parts, being derived as we all are from the same stock. Britishers have a reputation with the rest of the world for being sportsmen. There is no reason why we should refute this reputation by being divided amongst ourselves over a few unpleasant incidents.

LIGHT INFANTRY TRAINING.

By "X". (I.A.).

I wonder how many there are to-day who, like me, are puzzling their heads over the term "Light Infantry Tactics." They no doubt have read Chapter XII of Henderson's "Science of War", particularly pages 344 and 349 to 352, and perhaps have hoped to find inspiration by reading:—

British Light Infantry in the Eighteenth Century, by Colonel J. F. C. Fuller, D.S.O.

The Diary of Sir John Moore, edited by Major-General Sir J. F. Maurice.

The Future of Infantry, by Liddle Hart.

Sir John Moore's System of Training, by Colonel J. F. C. Fuller.

I admit I have found little inspiration in these books, but I have gone so far as to put down on paper some random jottings, which I have now arranged in some sort of order and give for what they are worth.

1. *Some points of principle.*

(a) We are endeavouring to break up a stereotyped habit, but while doing this we must remember that principles are immutable.

(b) The skilful co-operation of all arms in battle is still of paramount importance; fire which makes movement possible is just as essential as ever it was.

The term "Light Infantry Tactics" may lead some to become obsessed with a desire for speed: but speed, without co-operation of other arms is useless, and if we sacrifice the principles of protection to speed we will deserve what we will surely get—a raspberry in peace, regretable incidents in war. It is the duty of any commander to bring his men into action at the top of their form so far as circumstances permit. To cover 30 miles, using a "run and walk step", and arrive in an exhausted condition is worse than useless. Light infantry tactics require alertness and quick thinking, but the brain is dulled by physical fatigue.

On the other hand, to be able to bring a battalion into battle after a 30 mile march, in record time, with sufficient energy remaining for the task in hand, would be the ideal. We must strive after the ideal, but, in doing so, it is as well to remember that it is the wise man, gifted, as he is, with a sense of proportion, common sense and a practical brain, who exploits the sanguine imagination of the enthusiast.

(c) Static conditions will occur in war, but it must be the fixed aim of all commanders to postpone these conditions by the fullest possible use of manœuvre.

(d) One can only manœuvre round a fixed point; unless the enemy can be pinned down to that point, he will avoid the pretty, well-timed blow we have prepared for him, or will move his troops to parry it.

We find this to be one of our difficulties when fighting on the North-West Frontier. The tribesman will not be pinned. He possesses nothing of sufficient importance to himself to make him stand and fight, and we can rarely conceal our movement from him. In the South African War our turning movements came to naught because the Boer could not be forced to hold on to his positions. He had unlimited space in which to manœuvre and there were other positions he could select. This difficulty may well be present in any war between a first class power and another power of a lower category.

(e) The man with the rifle, whether he attacks the front, rear or flanks of the enemy, will, so far as he is concerned, be attacking to his front. Manœuvre does not mean that he will reach his objective without being fired on.

(f) When static or semi-static conditions are forced on us, the main considerations must be given to the production of a more thorough, detailed and centrally controlled "fire plan" than will be necessary under fluid conditions.

2. In training it must be clear to all ranks what phase is being practised :—

(a) The approach march.

(b) The contact phase.

(c) The attack (the "break in").

(d) Infiltration (maintenance of the momentum of the attack).

(e) Exploitation (the "break through").

Light infantry tactics should be employed in phases (b) and (d) and, whenever the ground permits, in phase (c).

3. Nothing new is implied by the term "Light Infantry Tactics" and, where manœuvre is possible and the ground suitable (for it has little or no meaning without these conditions), the expression, put briefly, means the skilful use of ground and the "shikar habit", combined with tactical unity. It presupposes confidence of the individuals and of the unit in their own weapons. One may say this is all very dry and commonplace—have we not been brought up in these platitudes from the day we joined the army? Are we not making a mountain out of a mole-hill over this business of Light Infantry Tactics? The fundamental fact is that the secret of Light Infantry Tactics lies in attaining a higher standard of leadership, especially amongst the junior leaders, than at present exists.

That our standard of leadership should not be of the highest is not surprising when we realize that in the abnormal conditions of the Great War an infantry attack could only penetrate up to the limit of the range of its supporting artillery or tanks. However successful the attack may have been in its initial stages, the time taken to bring up artillery and the limited radius of action of tanks enabled the enemy to counter any marked success in exploitation. As a result, infantry learned to regard their weapons solely as a means of holding the ground won: they forgot, and perhaps some never realized, the value of their own fire power in the attack under more fluid conditions. The communication trench was the only ground they were accustomed to use. It takes time for those who have fought in the greatest war the world has known, to modify the very deep impressions it made on their minds.

There is another point. The reactions to these impressions and experiences, combined with the general revulsion of feeling against war, have led to the over-elaboration of the "Fire Plan." Essential as the "Fire Plan" undoubtedly is, and always will be, we spend, in training, too much time on its niceties to the exclusion of the practical necessities of the situation.

4. Leadership is defined in the clearest language in *Infantry Training*, Volume I, pages 8 to 10. Here are some extracts from these pages:—

"Increased decentralization of command, necessitated by the power of modern weapons, calls for increased tactical knowledge on the part of all ranks."

"A leader, above all, must have the confidence of his men."

The British officer of the Indian Army starts at a great advantage, for the men trust him from the outset.

We are told that he gains the confidence of his men by :—

“ The clearness and simplicity of his orders and the firm way in which he insists they should be carried out.”

To be able to give simple and clear orders requires much practice, a good deal of study and infinite patience on the part of the instructor.

“ The virtue most to be cultivated in training, as in war, is energy. To do nothing is to do something definitely wrong.”

It is very easy to say “ we can't get on ; let us send for some more fire support.”

“ A leader must have confidence in himself.”

“ It includes initiative (*i.e.*, the ability to determine when independent action is required) and the necessary self confidence to take such action promptly and to assume responsibility for it, *as well as the power of decentralization*, (*i.e.*, the ability to execute an order through subordinate commanders without interference with their personal responsibility.”

The leader will only have this confidence in war if he has trained his subordinates to act correctly in peace.

5. To acquire Light Infantry Tactics, then, certain attributes are necessary :—

(a) *The Leader.*

- (i) A clear understanding of the object to be attained and a fixed determination, and confidence in his own ability, to attain it.
- (ii) A habit of using his own judgment and initiative.
- (iii) A habit of thinking from the enemy's point of view.
- (iv) A knowledge of the effect of manœuvres and a clear understanding of its employment. It should be a point of honour with a leader NOT to wait for orders or to ask for fire support, other than that he himself controls, until he is convinced it is necessary to do so.

He must expect the unexpected and devise methods of overcoming difficulties with the means at his disposal.

- (v) Capability in the use of ground and a correct appreciation of its use.

- (vi) A clear understanding of the physical limits to which his men can go, on a minimum amount of food and clothing, and still be fit to fight.
- (vii) An ever present desire to "mystify, mislead, and surprise" the enemy.

Remember that the complements of surprise are rapidity and secrecy. What would have been the result of the battle of Dujaila in the Mesopotamian Campaign had the necessity for rapidity not been over looked?

(b) *The man with the rifle* must be trained to acquire—

- (i) Physical fitness.
- (ii) Skill in the use of his weapons.
- (iii) The shikar instinct and skill in the use of ground.
- (iv) Ability to grasp quickly both the local picture and the meaning of the shortest orders issued to him.
- (v) Inquisitiveness and the importance of reporting its results.
- (vi) Proficiency in patrolling in all its forms; for which the habits of preparedness for all eventualities and general alertness are essential.
- (vii) The power and willingness to fight light and lie hard for a limited period.

(c) *The unit and its sub-units* must be able to combine elasticity with tactical unity over any conformation of ground, more especially of the type over which the Army in India may be expected to fight.

6. It is not difficult to jot down these attributes on paper, but the crux comes when we begin to think out how to instil them into the minds of our Indian Officers and N.C.Os.

Firstly, we may accept that the first essential in training is to instil in the minds of all ranks the desire to gain their objectives with the weapons at their disposal. But here, we must remember, it is definitely wrong to attempt to advance over the open, against machine guns in position, without adequate fire support.

Secondly, it is essential to develop, in the junior leaders, a sense of initiative and imagination; to increase their ability to train their own commands; to obtain a uniformity of method in the Battalion.

It is considered that this could best be done through the medium of special tactical courses run somewhat on the following lines :—

The instructor must know the language, possess a good knowledge of minor tactics combined with imagination, and a patient temperament.

The course need not last longer than three weeks, for we are not dealing with recruits. Weather counts for much; the course should not, therefore, be held when it is too hot to think.

Since a clean and simple order will gain the confidence of the men, a set of verbal order headings for attack, defence, outposts and patrols in particular, should be made out in Roman Urdu. Unless one is an expert in the language this is not simple, for it is unfortunately quite easy, by using the wrong word, to give an idea the very opposite of what is meant. Having decided on the headings, their meanings should first be taught. Then follow up by teaching their application by means of a series of tactical exercise on the sand model, the necessary attributes, both in a leader and man, being stressed throughout.

After this, to develop more initiative and imagination, candidates should be made to set their own schemes, first on the sand model and later choosing their own ground.

Lastly there must be some culminating excitement. Who can better provide this than the Commanding Officer by setting and conducting the final schemes? The results would anyway give him a good idea of the worth of his junior leaders, and it would save him the trouble of holding the tactical examinations for promotion to a Viceroy's Commission as laid down in R. A. I.

7. Would it be unreasonable to suppose that at the end of two individual training periods there would be a good proportion of confident junior leaders well fitted to train their platoons? Would not the germ of uniformity, initiative and imagination exist in the minds of the junior leaders? Would we not in fact be getting nearer the spirit of *Light Infantry Tactics* by means of a higher standard of leadership?

The growth of this germ will be the very grave responsibility of company commanders, who might bear the following points in mind :—

- (a) When verbal orders have been given by junior leaders, the company commander should make a point of giving the verbal orders himself as an example of how it should be done.

- (b) Whether the exercise is with or without troops, the verbal order headings, in writing, should always be in possession of all taking part in the exercise.
- (c) Platoon commanders should make their own programmes, schemes and solutions, and they must be encouraged to select ground other than that in the immediate vicinity of the lines.
- (d) Programmes and schemes must be prepared well ahead and vetted by the company commander. Time can often be found for this when the company is the duty company.
- (e) During platoon training, a company commander cannot expect to be able to supervise the training of all his platoons in one day. He must visit them in rotation and spend much time with each in turn.
- (f) The greatest patience is required. Results can be obtained in the end : for the material is excellent and the spirit is there in the shape of a marked desire to learn, combined with great keenness. But initiative and keenness can very easily be blunted by impatience on the part of the British officer due to the relative slow progress made. All criticisms should be constructive, but never destructive.
- (g) Organization must be maintained. Acting platoon commanders, platoon havildars and the sixteen section commanders must be told off if the permanent incumbents are absent.
- (h) Leaders must be made to take notes at the conclusion of the exercise ; this will assist them to carry on, on the right lines, when left to themselves.
- (i) Company commanders must decentralize : this is an essential principle in training if a leader is to have confidence in his subordinates in War.

A simple example :—

The company commander wishes to train his runners.

He must first satisfy himself that the instructor he selects is competent to teach. He then leaves the instructor to carry out the work. At the end of a given period he should arrange a test to

judge results. He will then know whether or not further training is necessary and, incidentally, he will be able to check his own judgment as to the standard of the ability of the instructor.

(k) Interest can be maintained by demonstration. To sit at a point of vantage and criticize the work of a patrol is a pleasant and profitable way of spending the time. But those criticized should be given an opportunity of becoming critics in their turn. The staging of a demonstration provides a useful opportunity for decentralization.

One of the best methods of developing self-confidence in a junior leader is to place him in command of a fighting patrol. Here he must stand alone. There is no company commander, nor are there other platoon commanders handy, to strengthen his confidence in himself. One could go on in this strain *ad infinitum* and dwell on the details of subjects in which the section commander should be competent to instruct, but there is neither time nor space for it.

8. There are, however, some points in training on which it may be worth while to touch. They are general points, and not connected with Light Infantry Tactics in particular.

Training of runners.

Runners will normally be the only form of communication on which the company commander can depend for keeping in touch with the situation. "If a commander does not know what is happening, he cannot make useful plans."

In teaching runners, a good deal depends upon the form of the message the runner is to memorize.

A verbal message should be short, contain essentials only, and follow a fixed sequence. The sequence of a message for a platoon runner might be —

- (a) The number of his platoon.
- (b) The position of the enemy (if any).
- (c) The position of the platoon and its dispositions.
- (d) The intention of the platoon commander.
- (e) The position of platoon headquarters.

A runner should be trained to grasp the general situation well enough to be able to give intelligent answers if questioned by the company or battalion commander.

A runner should be a picked man, fit, active and physically strong, and possessed of intelligence. He should be able to use ground. A dead runner is of no value.

9. *Night work.*

This is important, but is apt to be overlooked because it is inconvenient.

The following practical training is well worth doing :—

- (a) Moving into bivouac at night.
- (b) Packing up, loading of mules and getting ready to move in the dark as silently as possible.
- (c) Movements at night from column of route to more open formations.
- (d) Moving to forming-up areas and thence into position on the starting line.
- (e) Patrols, fighting and reconnaissance.
- (f) Digging and wiring.
- (g) Compass work for platoon commanders and platoon havildars combined with reconnaissance for a night march.

10. *Battle drill.*

Quickness in deployment is of vital importance, and to secure it it is essential that units should be trained on a definite and uniform system for shaking out into loose formations.

The special points to note here are—

- (a) Quite silent deployment.
- (b) Ground reconnaissance by mounted officers.
- (c) Ground reconnaissance by scouts.
- (d) Local protection.

How often have we been stopped by an obstacle and lost time, energy, and touch with other units, because we have not first found the way across it ?

(See the 1926 edition of *Infantry Training*, Volume I).

11. *Movement to forming-up areas prior to attack.*

The use of ground is of vital importance. If troops are located by the enemy in a forming-up area, the attack may never start.

12. *Collection and transmission of information.*

Whether about the enemy or topographical, the collection and transmission of information is all-important. When troops are held up, they must do everything in their power to locate the areas from which the enemy are firing, and the information gained must reach battalion headquarters. It is difficult to instil this in the minds of the

men, and naturally so, for they are in an unenviable position : but man is a creature of habit.

Machine guns, as enemy, firing blank, provide a useful aid to this form of training.

Since co-ordinates are seldom if ever accurate enough to be used for the building up of a fire plan, it will often be necessary for the commanding officer to visit the company commander and have the enemy's dispositions pointed out to him on the ground. A runner should be able to lead him up by the nearest and safest route.

13. *March discipline.*

Last, but not least, is march discipline (Infantry Training, Volume I, Chapter X). The longer and the more trying the march, the stricter must be the discipline. All men who will have to march with the battalion in war, should do so in peace. In peace one can, and one does, hide the useful cripple, but in war this is not possible, nor is he any longer useful. A man who conceals a boot bite, and does not have it treated with iodine, is little better than a malingerer. If the boot bite is caused by an ill-fitting boot, the platoon commander should be called to account. One cannot aspire to light infantry tactics with sore feet. Mounted officers should use their horses, and the men must be taught that there is a good reason for this.

Ed.—Your child's guide to knowledge is all very well, but you seem to have forgotten that there are such things as the training of the higher command. There are also boards, courts of enquiry, etc., and many other obstacles to training. How are you going to get a clear three weeks for your cadre course ?

Author.—I admit your remarks are pertinent. Finding it difficult to reply in my own words, I give some cognate quotations, culled from the writings of great soldiers :—

“ Higher commands should train on a cycle.”

“ Organize, Gentlemen, organize ; for organization is at the root of all success.”

“ Decentralization gives us time in which to think.”

“ Oh ! our Lords and Masters, we pray that some little leisure may be given us in which to think.” (A regimental officer).

“ Think, Gentlemen, think, but let me have a cut and dried plan at the end of it, and give it me in time to arrange for your requirements.” (A Brigade Commander).

THE INDUSTRIALISATION OF THE U. S. S. R.

BY STEPHEN BARNES.

In estimating the success or otherwise of the much advertised first "Five Year Plan" and its recent successor the second "Five Year Plan", one should first consider what exactly is the ultimate object of their author, Stalin, and what does he, in reality, wish to achieve through the medium of these 'Plans'? It is therefore submitted for the consideration of those interested in this question that this one project (the industrialisation of the U. S. S. R.) has two inter-dependent and yet distinct objects.

- (a) The first is economical; this at first glance would appear to concern the Soviet Union only, and to have as its aim the gradual revolutionization of the industrial system within the U. S. S. R., with the ultimate object of making the country independent of imports from abroad.
- (b) The second object is undoubtedly political; that is to say, there is a deliberate determination to create the maximum surplus of Soviet Goods (confined at present mostly to raw materials) for dumping abroad, and thereby to undermine the capitalistic system of foreign countries where the cost of labour is higher.

This challenge, which it undoubtedly is, must therefore be regarded as another form of Soviet intrigue, sponsored by the leaders of the KOMINTERN AND PROFINTERN. The progress made to date in the realisation of these two objects, diagnosed above, should be examined separately.

In the case of the first object, the Soviet leaders, through the 'GOSPLAN', had set out for the 'mobilised' population of the Soviet Union a definite programme of construction and production, which was to have been completed by the end of 1932. Within this period the ambition of the Stalin faction was to convert the whole of the Soviet State, including the various Autonomous Soviet Republics, into one centrally-controlled and inter-dependent industrial concern, embracing not only the production of factories, mines and forests, but also that of agriculture.

This was to be achieved, as regards agriculture, by the ruthless 'liquidation' of all private farming and the setting up in its place

of 'kolhozy' (Collective Farms) and 'sorhozy' (State Farms), now commonly referred to in the Soviet jargon as Grain and Cotton 'Factories'. Heavy industries were to be modernised by the importation of modern machinery paid for by exporting raw materials to the utmost productive capacity of the Russian masses. It cannot be denied that thanks to the fanatical enthusiasm and relentless driving power displayed by the leaders, and, in a no lesser degree, to the sacrifices imposed on the dumb and now cowed Russian masses, the first "Five Year Plan" has undoubtedly brought into being many so called 'Constructional achievements'.

On the other hand it is apparent even from the Soviet Press that the first "Five Year Plan" did not work quite as smoothly as it was hoped and this would explain the frequent references in the Bolshevik papers to 'breaches' in the Five Year Plan 'front'. We know from many independent sources that new factories recently erected have already revealed serious constructional defects. The same may be said as regards the new railways, notably the TURK-SIB, not to mention the rapid and ever increasing deterioration of all railway transport throughout the country. We have frequently heard that owing to the shortage of fuel, caused by the inability of the Soviet railways to cope with the country's transportation requirements, and to the decline in the coal output in the Donetz Basin, newly erected factories in the Ukraine cannot at present be operated to their full capacity. In spite of this, we know that the Soviet Government in its anxiety to obtain foreign currency, persists in exporting its coal from Black Sea ports—notably to Italy. Mention should also be made of the famous and recently completed hydro-electrical station at DNIÉ-PRPETROVSK, which is reported to be working only at 20 per cent. of its full capacity, because, it is alleged, that the present requirements of the area, earmarked for supply of power from this station, fall far short of its full productive capacity. But the greatest disappointment to the Soviet authorities must surely be on their agricultural 'front'. Here we find that despite the centralised control instituted over production through the medium of 'KOLHOZ' Committees and the introduction of intensified 'tractorization' in these grain 'factories', at the end of the first "Five Year Plan" the inhabitants of the towns, with the possible exception of Moscow, were still compelled to exist on short rations and to stand in bread queues.

These failures which have been exposed at frequent intervals since 1930, would show that there must be serious defects in the central apparatus responsible for the execution, and presumably also in the technical control over the operation of the 'Plan'. To account for these 'breaches' the Communist leaders, in order to cover their own incompetence, are compelled to find scapegoats from among the non-proletariat classes. These unhappy people are arraigned at frequent intervals and with the maximum publicity before Revolutionary Tribunals in Moscow. Only recently the attention of the whole world was centred on the arrest and spectacular trial of the employees of Metropolitan Vickers, among whom were a number of British engineers, who were accused of 'sabotage' and espionage. Thanks to the strong stand taken up by the British Government on behalf of these engineers, their ultimate fate could not have caused undue anxiety to anyone conversant with the mentality and methods of the Bolsheviks. By arraigning these men on what is now generally accepted throughout the civilized world as trumped-up charges and finding them guilty, the Soviet authorities felt that they had cleared themselves in the eyes of their own people. Moreover it was soon realised that, for the sake of keeping Thornton and Macdonald prisoners for two or three years, it would prove inexpedient to have the doors of their best customers closed against them. So Thornton and Macdonald are now back in England and Soviet goods are once again entering British ports unhampered, thus enabling the Soviet Government to resume the collection of English 'valuta' in payment of these goods to finance the 'industrialization' of the Soviet Union. In the meantime negotiations for the conclusion of an Anglo-Soviet Trade agreement have been resumed. Thus the Moscow trial which has served its purpose to the Stalin faction is forgotten and we are back where we were. Litvinoff must be smiling.

It is here suggested that these theatrical displays, to which Moscow is becoming more and more attracted, only go to emphasise the belief among thinking people, both in and outside the U. S. S. R., that neither the first 'Five Year Plan' nor the second, (the latter designed by Stalin to develop the light industries), have been working entirely to 'plan.'

This brings us to the second object underlying Soviet industrialisation, namely, the political, or the one which is directed against the

whole existing foreign capitalistic system. I firmly believe that as long as the present Soviet leaders remain supreme in Moscow they will continue to call upon every workman and peasant in the U. S. S. R. to strain every nerve to increase the volume of national production with which to flood the foreign markets. I interpret the true meaning of these 'Five Year Plans' as a means of harnessing one hundred and sixty million people to a chariot driven by a ruthless charioteer who calls on his team for 'Five Year' periods of special spurts. Exactly how far this team will travel during these periods along the road of intensified Soviet production would appear to be of a secondary matter, since, as suggested above I believe that the charioteer will continue to call for further 'Five Year' spurts until he feels that his object has been achieved.

In the meantime the actual producers, whose standard of living is incomparably lower than in any other European country, are compelled by the authorities to 'go without' and to surrender the fruits of their labours for consumption abroad. They are told that these sacrifices are essential and that only by increasing their output is it possible for the Soviet State to acquire the necessary 'exportable surplus' by which alone the financing of the 'Plan' can be secured. To illustrate this I need only take as my examples beet sugar and kerosine oil, both of which are produced in the U. S. S. R. and yet are hardly procurable by its inhabitants, for the simple reason that the authorities require the maximum quantity of these two commodities for dumping abroad and converting them into 'valuta', *i.e.*, negotiable foreign currency.

The present world-wide trade depression appears to be forcing foreigners to play into the hands of the Soviet and indirectly helping the fulfilment of the 'political' object of these 'Plans'. For the past five years, or ever since the U. S. S. R. first embarked upon her programme of intensified industrial reconstruction, she has been the world's largest buyer of heavy machinery. The 'heavy' industries throughout the world have been particularly hard hit by this depression and consequently every country has been anxious to obtain a share in the provision of the technical requirements of the Soviet Government, if only to enable them by this means to reduce the number of their unemployed. This policy, if apparently justifiable, must surely bring retribution in its wake. At the moment foreign

'capitalists', though finding a temporary outlet for their wares in the U. S. S. R., are in actual fact providing that country with plant and machinery which, by Stalin's plans, will make the Soviet State not only independent of foreign imports, but will enable it to increase the volume of exports of her uneconomically priced manufactures, with the ultimate object of killing the competition of highly paid foreign labour. As far back as 1930, Soviet textiles, produced by labour, paid in worthless 'chervonetz' notes, were being dumped in Lodz, the heart of the Polish textile industry, causing a rapid rise in unemployment among the Polish operatives, who, unlike their Soviet confreres, demand a living wage. More recently we have heard that Soviet piece goods are now being dumped in increasing quantities in the Malay States, where they are successfully competing with that class of goods produced by Japanese labour. We thus see that the British piece good manufacturer, who in past years found a profitable market in Malay, is now being elbowed out from that country by the competition of Soviet and Japanese cheap labour. Nearer home, we may quote the instance of Soviet ready-made suits, dumped in Hull during 1930 and 1931 and sold in Yorkshire and elsewhere in the North of England at 15s. 9d. ! How could Bradford compete with such prices ?

In past years we have frequently heard of the Bolsheviks being referred to as a military menace ; we have also been warned of the dangers of Bolshevik propaganda. To-day, Western civilisation is threatened by what strikes me as a far greater menace, namely, Communistic Commercial Enterprise, based on sweated labour production, with which Moscow is now delivering an assault against the whole Capitalistic 'front' or system. Sweden and Finland appears to be among the first casualties, as all their important timber industries are already in a precarious condition caused by the heavy dumping of cheaply produced Soviet timber on the English market. In this connection let us examine for a moment the prices of Soviet timber, *e.g.*, 3x9 Redwood deals, the price of which particular size and quality governs the timber market. These are certainly illuminating. In 1928 the gross f. o. b. price per Standard (One Standard equals 165 cut feet) was £16-10-0 ; by 1932 the price had fallen to £8-16-6, with a stipulation that if the Pound sterling fell below the value of 10/- gold, the Soviet Government would have the option of cancelling the contract. This means that the latter were willing to accept £4-8-0

gold per Standard before they would *consider* cancelling the contract. The price prevailing immediately before the war (1910-14) was £10-0-0 per Standard f. o. b. for 3×9 Redwood deals! No 'Capitalistic' country where workmen are paid a living wage can withstand competition of this sort.

In conclusion, I would say that while not believing in the ability of the Soviet leaders to convert their industries into a sufficiently perfect machine to compete successfully with foreign manufacturers on level terms, they may eventually succeed seriously to disorganise, if not actually to destroy the whole of the industrial system of Western civilization. Should this be achieved, the object of the "Five Year Plan" will be deemed a success by its author, regardless of any constructional defects and 'breaches' which may have occurred on the "Five Year Plan front" within Soviet territory. Serious remedies will soon have to be taken by those countries whose industries and very economic existence is now being challenged. While the U. S. S. R., was a large buyer, concerted action against her was naturally impossible. But as already shown above, there are good reasons to suppose that the Soviet Government will shortly cease to be a buyer. All countries desirous of preserving economic stability and maintaining a reasonable standard of living among their working classes and what is still more important, to check the rise of unemployment, must try and realise their danger and be prepared to act in unison against this Communistic Commercial Enterprise. The moment the U. S. S. R., have ceased to buy from abroad the raising of tariffs against Soviet goods will be useless and only by fixing specific quotas on all Soviet raw and manufactured produce, strictly in accordance with the requirements of any particular country, will it be possible for the 'Capitalistic' world to stem and control the tide of cheaply produced Soviet goods now threatening its shores.

THE CO-ORDINATION OF THE FIGHTING SERVICES.

BY CAPTAIN J. H. C. CURRIE.

This is a question of more direct interest perhaps to Officers of the British Service than to those of the Indian Army. The excuse for bringing it before the readers of this Journal is based on two considerations: first, the importance of the role that the Indian forces *may* play should Britain become engaged in another major war; and secondly, the likelihood that India will herself be faced with the problem before long, provided she is able to maintain her present rate of progress towards Self-Government.

It is proposed to examine first the question of the number of the Services, and secondly, if the retention of three Services seems justified, to consider briefly some aspects of their present organisation and the problem of their co-ordination.

The essence of the "Two Services or Three" problem lies in the answer to the question "Is strategy two-dimensional or three-dimensional?" If two-dimensional, the Services that fight in those elements should be given charge of operations; if three-dimensional, then it would clearly be inexpedient to subordinate one of the Services to either or both of the other two. Up to the present time the element of force has been inherent in every weapon, with the exception of Propaganda, which is itself of no avail without the support of force, and in all past wars victory has been won when the enemy nation, through the direct application of force or through the knowledge that it is helplessly exposed to force, becomes unable to carry on the war. The following definition may therefore be accepted "Strategy is the art of applying force decisively to the enemy nation." Can force be applied decisively, therefore, by sea, land and air, or only in two of these elements?

Whatever may have been the case in the past, in modern war every nation will be dependent on outside resources for some essentials. By closing the arteries through which these *may* reach the enemy—the ultimate task of a belligerent having command of the sea—, Sea Forces exert an indirect, but none the less decisive, pressure. History has produced few clearer examples of this fact than during

the war of 1914—1918. When the Allied Armies at last overcame those of the Central Powers, the German nation was already beaten. It did not need the threat of invasion to make it sue for peace. The blockade had already broken the German *morale*. To-day the trade routes of the world lie across the seas. It will not be till they stretch across the skies, if they ever do, that the sea will become an unimportant medium for strategy. Nor is it possible to envisage a war fought solely in the air and on the sea. Nations live on land, and land is man's natural element. It must be many years before invasion and occupation of enemy territory ceases to be one the most essential methods of depriving the enemy of the will and power to fight.

Sea and land warfare, therefore, are means by which the decisive application of force to the enemy may be exercised, and strategy is at least two-dimensional. Owing to the speed and range of modern aircraft and the damage that they are capable of inflicting, the air offers the most direct medium for waging war on a nation as a whole, and there can be no question that force can be readily applied in this manner. The air's claim to be considered a separate medium for strategy, however, must depend on the degree of decisiveness of such aerial attack.

No nation can afford to maintain in peace sufficient aeroplanes to carry out a series of large scale aerial attacks on the outbreak of war, and, at the same time to preserve a margin for defence against enemy reprisals and for co-operation with the other services. Nor will the employment of such civil aircraft as are at their disposal give them the great increase of strength that at first sight might appear possible. Large passenger-carriers, for instance, because of their "un-manceuvrability" and their greater utility as troop-carriers, and small private aeroplanes, because of their comparatively slow speed and their value as training machines, would probably not be used for aerial attacks at all. Other types in varying degree would be of greater utility, but against an enemy, who had an organised air defence system, heavy losses in them would probably be incurred. If belligerents are not unequal at the beginning of a war, many months must elapse before aeroplane construction would increase sufficiently to enable one of them to achieve predominance in the air. Until that time a nation would have to rely on those aerial forces, with which it had provided itself in peace with the addition of suitable civil machines and the gradually expanding output of its factories. Experience in the last war and the

lessons of peace time exercises show that heavy losses are to be expected if repeated attacks are made on the civilian centres of a prepared nation. It is unlikely, therefore, that a nation would risk embarking on a series of attacks against civilian centres of population until it was assured of replacements adequate for maintaining its own aerial defence, for co-operation duties with the other Services and for other duties independent of them.

Perhaps the greatest advantage of aerial attack is its inherent possibility of effecting surprise, and an attack on the outbreak of war, or even before war is declared, would combine with this advantage the attractive possibility of shattering the enemy's *morale* at one blow and thus avoiding the exhausting effects of a prolonged war under modern conditions. The dangers, however, will normally be too great to justify the adoption of such a course, and no nation is likely to give up the substance for the shadow by prejudicing his present and future aerial strength in relation to the enemy in thus embarking on an immediate attack on the civilian centres of an enemy nation—a policy hitherto untried, of doubtful result, and accompanied by the certainty of heavy losses. It may be expected that the theory of seeking a quick decision by indiscriminate air bombardment will give place to one of husbanding air resources and confining air bombardment to objects of more direct military importance.

With the small and highly efficient armies of to-day and to-morrow early decision will probably be sought on land. The necessity for retaining the maximum air support for this purpose is an additional reason for confining the air rôle initially to offensive operations against targets of military importance. Should no decision on land at first be obtained, the next attempt to force one may be expected when the nation's second line troops are ready to take the field. This will be before more than a fraction of its ultimate potential air resources can be developed. This second attempt will also require the maximum of air support, and these requirements will also have to be met by economy of air resources to that end.

So far, therefore, it does not appear that the air offers the means of applying force decisively to the enemy nation. This, however, is based on the assumption that the necessary margin of superiority will be lacking, and will probably be true for the reasons shown above. The opposing nations, however, may not be evenly matched and, if one belligerent has the necessary superiority *ab initio*, it is difficult to

see what considerations, other than those of humanity or foreign policy, would prevent him endeavouring to strike the enemy directly from the air.

If, moreover, no early decision is reached and the war is prolonged, there is no reason that the belligerents will remain equally matched in the air indefinitely. In the war of 1914-1918 first one side, then the other, obtained the ascendancy temporarily before it finally passed into the hands of the Allies. Similarly in a future war the superiority in resources of men or material will eventually give one side a definite supremacy, and, if this supremacy is used for action against the civil population, the effect is likely to be enhanced by the fact that the people will now be shaken by the losses and privations of modern war. It is possible, therefore, to take direct and decisive action against an enemy nation through the medium of the air, the necessary condition being an adequate margin of superiority. Strategy thus logically becomes three-dimensional, and it would seem that the present policy of maintaining a separate air force is logically justified.

Some other aspects of the present organisation of the Services will now be considered, and the problem of their co-ordination. The alternatives to the present organisation are either to have naval and military air wings, abolishing the R. A. F. entirely, or else to retain a proportion of the R. A. F. for independent air action and fuse the remaining portions of it with the Service with which they would normally act. It is difficult, however, not to regard either of these steps as retrograde when it is remembered that they were stages in the evolution of the R. A. F. in war. Such a reversion to the system of naval and military air forces might be expected to produce better co-operation between the Service concerned and the air, but, in view of the necessity for officers of all Services in the higher ranks being as unparochially minded as possible, it may be worth recalling the advantages of the present organisation in giving air officers experience of other Services; an advantage that would be lost to an officer who had risen through a purely naval or military air force. It is, for instance no uncommon thing to find R. A. F. officers, who, having already initially served in either the Army or Navy, have subsequently on transfer to the R. A. F. had experience with both the Fleet Air Arm and Army Co-operation Squadrons. Nor can we draw inspiration from other nations, none of which are similarly situated to ourselves. Russia's air force for instance, is a military affair, Russia's "defence" problems

being almost entirely military. There is nothing to indicate that any foreign nation's system is superior to our own for our own unique defence problems.

In the event of war questions of policy are decided in the last analysis by the Cabinet—probably in the form of a War Cabinet of not more than six members. The Cabinet acts on the advice of, or chooses between courses presented by, the chief co-ordinating body for Imperial problems, the Committee of Imperial Defence, of which the Prime Minister is the sole permanent member. As regards Service matters the C. I. D. receives advice from the three Chiefs of Staff; and for co-ordinating the views of the three Services there exists the Chiefs' of Staff Sub-Committee of the C. I. D. There is thus a definite organisation for reviewing and settling questions of Imperial Defence, presided over by the Prime Minister, and having at its disposal the considered opinion of the three Services as presented by the Chiefs' of Staff Sub-Committee, which has been aptly called a "super Chief of Staff in Committee."

The weakness lies in the fact that the Chiefs of Staff may find themselves compelled to recommend two or even three different courses to the C. I. D., the latter, or perhaps finally the Cabinet being compelled to give a decision on a problem governed by highly technical considerations, which by virtue of their training the members thereof are unfitted to weigh. The danger of a politician being swayed more by the personality of a Chief of Staff than by the soundness of his views is easily apparent, especially when it is recalled that a Service training emphasises the value of deeds rather than words, and opportunities for intercourse with the politician may arise rarely, if at all.

This danger of divided counsel and the desire to reap the advantages of unity of advice on Service matters before the Cabinet has led to a number of suggestions for an organisation to achieve this. In essence these amount either to a Ministry of Defence, or to a Combined Staff with a Chief of Combined Staff at its head.

The advantages of the former may be summarised as:—

Economy in Staffs and Establishments.

Non duplication of certain work—*e.g.*, Intelligence—common to all Services.

In General, closer co-ordination of, and co-operation between, the three Services, and,

One authority to represent all Services.

The dangers and disadvantages, however, though less apparent are none the less real. Could a man with no technical knowledge of any Service, for instance, ever be found to be an efficient Minister of Defence? Would co-ordination of, and co-operation between the Services, closer than is being developed under the present system be in effect achieved? What would be the power of the Defence Ministry? The pressure exerted on those responsible for national policy by the heads of the Army and Navy in Germany before the War is an illustration of the evils of what may event if fighting Services, filled with a spirit of aggression, are allowed to become too powerful. This is reflected at the present time in Japan, where the Army appears to have forced the hands of politicians in their dealings with China. We may also see a warning in the action of France, who has tried the experiment and abandoned it.

A Combined Staff would appear to hold out a number of advantages. Such a Staff would be formed from graduates of the Imperial Defence College, who, instead of reverting to their own branch of the Service for 15—20 years, as is the case at present, and having had no great scope to exercise that breadth of outlook developed at the College, would fill certain Staff and Command appointments in their own and the other Service as well as on the Combined Staff, and the Secretariat of the C. I. D. From the highest ranks of this *haute école* one officer would finally be chosen as Chief of the Combined Staff. There would thus be created a body of men equipped with great experience of the three Services, who would be at the disposal of their presumably most able member, to give before the C. I. D. the united opinion of the Services on matters affecting any or all of them. These advantages are obviously great but they are dependent on a number of considerations that may well contain the seeds of fatal disadvantages.

The vital point is the choice of the right Chief of the Combined Staff. Who would choose him and how? How often would he have the full confidence and support of all three Services? Would he after all be able to decide between conflicting Service views more effectively than the statesman?

Although after graduating at the Imperial Defence College no arrangement exists whereby officers are given Staff and Command appointments in their sister Services, they are very far from being immersed in matters affecting purely their own Service. There are many appointments involving co-operation with other Services, and

these officers are appointed to them. Nor does an officers' experience of the other Services necessarily commence only after passing through the I. D. C. Many officers hold such appointments at the commencement of their Staff careers. This growing inter-Service co-operation is an accomplished fact, and any officer who reaches the highest ranks in the future will have had experience of the other Services.

Much must of course depend on the character and ability of the Prime Minister, but, in dwelling on the evils of the Chiefs of Staff being unable to present a unanimous recommendation, it is apt to be forgotten that Ministers are used to making decisions between conflicting view points in matters of every degree of importance, and, where other Departments of State and may be the Dominions and Allied nations are involved, it may even assist them in reaching a comprehensive grasp of a problem to hear the views of individual Services, even if they are at variance with one another. The dangers of disagreement in the Chiefs' of Staff Sub-Committee may in fact be exaggerated.

Finally, what is the record of the present system? The C. I. D. since its inception has done an immense and invaluable work. It has had to make decisions soundly and rapidly. As an example the question of the despatch of the Shanghai Force to China came up before it at 11 a.m.; by 4 p.m. the same day the executive orders for its formation and despatch had been sent.

Nor has the work of the Chiefs of Staff Sub-Committee been less noteworthy. In the large number of questions dealt with there has been no case of their failure to agree seriously embarrassing the C. I. D. The present system works and will work as constituted in time of war. Further it will become still more effective when the products of the I. D. C., both civil and military, begin to make their influence felt.

The Cabinet, headed by the Prime Minister who is directly responsible to the Crown, is the final executive in questions of national policy, and it is the Prime Minister, therefore, who can best say of what value the C. I. D. and its subsidiary organisations have been. Its successful continuance through the office of successive Prime Ministers is sufficient indication of its value. It does not seem difficult, therefore, to justify the continuation of the present system and the expectation of even greater results from it in the future.

THE RELIEF OF LUCKNOW.

(The following is an extract from a private letter, written by an officer who took part in it, to his brother).

"With General Sir Colin Campbell from the 1st to the 22nd November 1857."

You will be anxious to hear some account of my proceedings for some time back so I will endeavour to give you a sort of summary, commencing at Cawnpore. I arrived there on the 23rd October, 13 days after leaving Calcutta. Colonel Greathead's force came in there on the 26th and I left Cawnpore with it on the 30th, being attached to H. M. 75th Regiment till I could join my own regiment. We crossed the Ganges by the bridge of boats and were in the Oude country. We encamped a few miles from Cawnpore that day. On the 31st we marched to Ingdespur and on the 1st November, Sunday, to Bunnee, 15 miles from Lucknow. On the 2nd we advanced a few miles to Maragunga and were going to pitch our camp when our advanced guard was fired upon from a village a little to the right of the road. Upon this the main body was ordered up and a party was detached to the left flank of the village while the brigade, with which I was, went off to the right. Our Artillery opened and after firing a few rounds the village was taken by assault by a party of the 93rd Highlanders and Sikhs and burnt. The enemy fled and many managed to escape by concealing themselves in the tall grass with which the country is covered at this time of the year (principally, *cholum* if you recollect what this is, like Indian corn—and large crops of sugarcane). We then proceeded on across country to several other villages, driving the rebels out of them, killing a few and burning the houses. We saw a large body of the enemy, horse and foot, in front of us on the plain, but they bolted as we came near them. We got back to camp at 2 o'clock, after rather a pleasant day. It wasn't hot and was tolerably exciting. We killed about 200 of the rebels. I passed several on the plain who had been hit by our round shot. They were horribly torn. One fellow had his leg taken off, at the knee, the bones were exposed. I never saw a more ghastly wound. Another had his head nearly taken off. They were dead enough. We encamped at Maragunga, five miles from Allum Bagh, and there we were halted till

the 12th waiting the arrival of Sir Colin Campbell. He came on the 10th bringing reinforcements which made us up to about 6,000 of all arms. He reviewed on the evening of the 11th and made a short speech to each regiment, which was received with great demonstrations of enthusiasm. He is an old looking tough wiry fellow, rather hot-tempered and as brave as a lion. On the morning of the 12th we marched to the Allum Bagh where we now are and had a skirmish on the way, but nothing to speak of. The Allum Bagh, which means the "Garden of the World," was a summer residence of the Queens of Oude. It is a huge handsome house, square with four towers, and is surrounded by a high brick wall enclosing a space of about 1,000 yards square, round the building. At each angle of the wall is a turret. When Havelock went into Lucknow to relieve the garrison he left all his baggage and carriages with a party of 600 men at the Allum Bagh and it was held by them till our arrival. When they first went there the enclosure was a beautiful orange grove with broad walks and channels of water on each side, but, when we got there, the whole space was completely bare, all the trees had been cut for firewood, the wall loop-holed and guns placed at the angles of the wall. The enemy used to fire round shot into it daily, causing much annoyance and killing some of our people. I found here a detachment of 130 of my own regiment under Captain....., about whom more anon, with a lot of young officers of ours, amongst others, Frank Dobbs, son of Major Dobbs, with whom my mother is staying. I, of course, joined our own fellows and the next day I was sent in command of a picquet to a ruined village about a mile to the right of the Allum Bagh. The Chiefs camp was pitched on the plain to our rear. Franklin of the Sikhs, Parry of my regiment and young Dobbs were on picquet with ours that day and the first and last of these, Franklin and Dobbs, were both killed two days after in Lucknow. In the afternoon the enemy came about our position and began firing at us, but I sent out some of the Sikhs supported by a few Europeans, who drove them back and they left us alone for the night. The next morning, the 14th, our whole army was in motion and, when the sun rose and the mists cleared off, I saw as fine a military spectacle as I ever saw in my life. The whole force was moving up on a road that led close past our picquet—horse, foot and artillery—their arms glancing in the sunbeams, their faces lighted with the expectancy of battle. When part of them had passed we were beginning to wonder

whether we were forgotten in the bustle of the advance, when a staff officer galloped up and told me to bring away my men and he would show me where their breakfast was ready for them. However, no breakfast did we get, nor anything at all but a sup of rum and a bit of hard biscuit on which we subsisted till late that night. Our little detachment, with a detachment of the 90th and one of the 84th have formed into a regiment for the time being, called the "Battalion of detachments" and brigaded with the 93rd Highlanders and a Sikh regiment, under Brigadier the Hon'ble Adrien Hope. We were commanded by Major Barnston of the 90th, as gallant a soldier as ever trod the earth. Well, we marched away, refusing the high road to Lucknow by which route the enemy expected us, we took a country route to the right and passed over open country the greater part of the way. The dust was stupendous and the heat great, but we met with no opposition and advanced steadily till about 12 o'clock when we crossed a huge plain and came to a park wall surrounding a large park in the centre of which, on a small hill, stands a fine country house called the Dil Khusa (Heart's Delight). The Artillery made several breaches in the wall which was of mud and we entered the park in two columns and advanced up the hill. The enemy had abandoned the house and taken up a position at some distance in a magnificent Palace called the Martiniere. It was built by a French General who lived formerly in Lucknow and, at his death, he left it as a charitable institution—a sort of orphanage. Going up the hill we put up lots of deer and hares, some of which were caught by the soldiers and proved capital grub the next day. When we got to the top of the hill the enemy's artillery opened on us. We were drawn up behind the house and were ordered to lie down while our guns went to the front and began pounding away at the enemy's. A round shot came over the house and pitched right among the Highlanders near where we were lying, carrying off one poor fellow's head and another's leg. Our guns shut up the enemy's fire and we got the order to advance again. We moved down the other side of the hill, out of the park, across a broad road and made a rush at the Martiniere, but it was empty, the rebels had bolted and we found ourselves in possession. We got a gun there that they could not carry off. I never saw anywhere a more splendid building. I shan't attempt a description. The style is Italian and the rooms are all painted and ornamented with frescoes in excellent taste. The pavement is tessellated blocks and white

marble. There is a fine stone tank in front from the centre of which rises a tall fluted pillar, very high and beautifully proportioned with a statue on the top—round the roof outside are immense statues and above the centre of the building is a sort of dome, with a staircase leading up the outside. From the top the view of the city and the country is magnificent. Well, we made ourselves at home in the place, the battalion of detachments was ordered to occupy it for the night—it was now about three in the afternoon. A wing of the building was assigned to my detachments to guard. Captain..... was on the rear guard, so I was in command of our fellows and I had just posted my sentries and found a very comfortable upstairs room for the officers to live in, when the call came to "fall in," and away we went at a tearing pace out of the Martiniere, down the broad road that leads from it towards Lucknow about half a mile, till we came to a large grove of trees through which the road passed. There we were halted and were told we were to bivouac for the night. We felt very jolly, arms were piled and the men broken off. The camels came up with the beds and our servants and were speedily unloaded. My boy got out my things and I was just going to enjoy the unspeakable luxury of plunging my head into a basin of cold water after all the heat and fatigue of the day, when "fall in" came down the ranks again, the men stood to their arms and we were formed up in line under the trees across the road. Then little firing began on our front and the bullets began to whistle over our heads, pattering like falling rain through the trees, one or two were hit but nothing very serious. Soon after we moved off to the left out of the grove, through a breach in a wall, ascended a slope where a lot of our guns were firing tremendous salvoes, passed the guns, saw a battered building in our front some hundred yards distant, advanced a little further and then broke into a rush with a cheer and away we went at the house, when our ardour was suddenly checked by coming on the brink of a canal full of water and too deep to be crossed, on the further edge of which the house was situated. There was nothing for it but to pull up, which we did and lay down in the grass near the bank of the canal. It was now dark, and the enemy, terrified by the tremendous fire from our guns, had bolted, so we left picquets along the canal and returned to our grove of trees. Our fires were soon lighted and our servants came up with dinner and if ever I enjoyed a glass of beer and a cheeroot afterwards you may be sure, old fellow, it was that night.

The next day was Sunday and we remained all day in the tope, exposed to a straggling fire of round shot and musketry, but, as we were well covered by a bank that ran round our position, we didn't suffer much. On Monday, the 16th November, we were under arms at daylight and at about 8, after the men had their breakfast, we started off for Lucknow. Our Brigade, led the advance. We didn't take the high road, but changed to the right and crossed the canal at a place where it was dry, crossed some fields and then entered a long narrow winding lane through a large village of mud huts, which was deserted, as we came up, by the inhabitants. I must, before going on, explain that the way by which we proposed to reach the Residency where Outram and Havelock were shut in, does not lead through the city but is through a suburb where the ground is open and intersected by regular metalled roads and here and there a palace, or country residence of some native swell, or large mosque. The Residency is on the bank of the river Goomtee, which was on our right and nearly a mile off. I will try and send you a rough sketch with this which will enable you to understand our movements better. We went on through the village, nearly smothered with dust, in single file in some places and—tolerable confusion; suddenly there was a check in front, then a tremendous fire of musketry began; we moved on again and, all at once, emerged from the lane, in front of an immense building in the open on our right about 100 yards from us. It was a large square enclosure, with very high walls and turrets, a gateway in front strongly fortified and the walls loop-holed. It is called the Secunder Bagh. It was full of the enemy who saluted us with a storm of bullets. The road on which we were was rather sunk and the men were thus somewhat shattered from the fire. A big gun was ordered up from the rear of our brigade and I was told to make my men to drag it up the bank and get it into position opposite the building. The excitement was tremendous. I remember having my sword in one hand and pulling like a maniac at the drag rope of the gun with the other, the men worked willingly, the gun was out in position, and with a few rounds drove a hole through the wall, where there was a window and then, without any word of Command but with a British Cheer, we went off in a mob, Highlanders, Fusiliers and 90th mixed up anyhow, right at the place, the first up went in through the hole. As I was running up I saw the gate to our left was open and, calling to my men to follow, I made for that. Most of the fellows I

had with me were recruits—it was the first time they had been under fire and they were rather backward—so we were just too late. When I reached the gate the beggars inside were shutting it in our faces. The few men who had come up put their bayonets to it and tried to force it back and one gallant fellow put his arm in and got a slice across the fingers for his pains. They shut the gate and bolted it, but we fired at the bolt till it gave way and then threw back the gates. Inside, on each side of the entrance was a sort of open verandah, or serai as we called it, crammed with natives. The men wouldn't go in with the bayonet which would have been far the better plan, but crowded the entrance and fired into these masses of human beings, till there was on each side a loathsome seething mass of bodies, dead and dying heaped upon one another, you never saw such a sight. Inside the enclosure were several buildings and in them the carnage was awful. In one room the next morning 62 sepoy, alive and unhurt, were found concealed under the dead. They were taken out and shot. Altogether in the Secunder Bagh we killed about 2,000. They counted 1,740 bodies the next day when dragging them out and stopped counting. They had provided no way of escape for themselves and all who tried to get over the wall or through the windows were shot down by parties outside. Our own loss was considerable, several officers were killed, amongst others, poor Franklin of the Sikhs and Captain Dalzell of the 93rd Highlanders from Dumfries, and a number were wounded. Two of my men were killed and several wounded. After this we advanced on the main road that leads to the Residency, leaving a force to occupy the Secunder Bagh. The next *piece de resistance* was the Kudum Russool, a mosque on a hillock to the right of the road. The artillery nearly knocked it to pieces and then it was taken and occupied by the Sikhs, who are as fine brave soldiers as ever lived. We advanced again, all the time under a heavy fire of round shot shell, occasionally grape and always musketry, from the trees and huts in the vicinity, till we came near the Shah Nujeef, a very strong mosque surrounded by a loop-holed wall. It lies low to the right of the main road and was hid from one's view by a small mud village and some low jungle. From this post and from a building called the "32nd Mess House," (because it was used as such by the officers of H. M. 32nd before the rebellion) some distances to our left front, the enemy kept up a tremendous fire; they also had a cross fire on us from a battery on the other

side of the river which makes a bend from the Secunder Bagh and flows nearly under the walls of the Shah Nujeef. We were ordered to get under cover and the big guns of the Naval Brigade, under Captain Peel of the Shannon, came up and for several hours the fight was kept up by the Artillery. We were a great deal exposed all the time however and lost many men. Major Branston was struck on the hip by a piece of a shell and fell off his horse into my arms and, giving me an order, he was taken to the rear and I hope he will recover, though his wound is a very bad one.

The command of the battalion now devolved upon Captain..... of my regiment, but I am sorry to say he wouldn't take it and allowed a junior, unfortunately for me three months my senior, to assume it. Captain..... is a regular hen and behaved so badly that an enquiry is now going on about his conduct and I hope he will be obliged to leave. He regularly funked and showed it too, most unmistakably. About two in the afternoon the Chief and his staff came up and I was ordered out to the right front with some of our men to skirmish and try to keep down the enemy's fire from the mud village. We got under a low bank, not a foot high, lying close to the grass and the men began firing, but we could produce little impression. We were exposed to a tremendous fire and many were hit. One poor fellow next to me was shot through the lungs and rolled in the sand at my feet groaning and gasping and declaring he was quite dead. I took off his belts and gave him some rum and water, which revived him so much that I thought he might live and with some difficulty got him sent to the rear, but he died soon after. After a while the 93rd Highlanders led by Brigadier Hope, came up on our right and went on through the village, which the enemy had now abandoned as we had set fire to the thatch roof of the houses. They got under cover of the mud walls and fired at the Shah Nujeef. I then took on my men a little to the left, crossed a road leading up the Shah Nujeef and got among some grass huts and a few trees. On crossing the road, which we did by a regular bolt, the fire was something indescribable. The bullets were falling like hail and it seemed wonderful that any of us escaped. It was now getting dusk when the Chief, seeing he couldn't get his men into the place, ordered up one of the big guns of the Naval Brigade to breach the wall; accordingly a huge 24 pounder was dragged up by the blue jackets and a party of the Fusiliers and opened about 30 yards from the walls. You can imagine the crash

each shot made at that distance. The uproar now was at its height—the shouts of the enemy and assailants—the rattle of the musketry and roar of the big guns—the groans and cries too of the wounded and dying as the shades of evening were deepening rapidly into night, the whole scene I shall not readily forget. I was standing with a knot of our men and Parry and Dobbs, beside a tree trying, all of us, to get a little cover from it from the enemy's fire, when I heard a bullet strike close beside me and poor Dobbs called out "Oh..... my leg is broken." He fell and I turned and lifted him up, tied up his wounds with my handkerchief, and assisted by a sergeant, carried him out of the fire behind a mud wall. Poor boy, the ball had entered his right thigh, passed quite through shattering the bone and lodged in the left. I was, of course, obliged to leave him and return to the men and I never saw him again alive. He was taken in a dooly to the Field Hospital and died that night. He was a fine high spirited boy and behaved most gallantly all the day. After the big gun had fired some rounds a breach was made in the wall, but it was then found there was an inner wall and no way in after passing the first, for the second was not breached. It was dark, many men had fallen and the order was given to limber up and take away the gun, preparatory to our retiring. The dead and the wounded were hastily collected and taken to the rear and we were going to retreat when some of the Highlanders, who had got close up to the wall, found they could scramble up the breach on to the top of the building. Up they went, the enemy bolted and at last the Shah Nujeef was ours. I can't tell you the feeling of satisfaction after expecting to retreat, to find we had succeeded. The Highlanders occupied the place and I gathered up my few scattered sheep amounting to about 40 and took them back to the place we started from. You may be sure we slept sound that night after the hardest day's work we had. Next day we were lying down near the Secunder Bagh all the evening, the round shots flying about in all directions, while the Artillery in front were pounding away at the 32nd Mess House. It is a very strong position—an old palace square with a deep dry ditch of masonry round it and a door in each side with a drawbridge. About one o'clock the Officer Commanding the detachment came to me and told me to take 50 men for a fatigue party to the Chief who would give me orders. Away I went and when I got up to Sir Colin he ordered me to form up my men and then, to my surprise, made us a little speech. He said

he wanted us for a service of difficulty, but it must be done quickly and *nicely* and if well done, he said he would recommend the Officer Commanding (that was me) for the Victoria Cross. Here was a chance. The service was to carry planks and materials for a bridge across the ditch at the 32nd Mess House. To make a long story short, we were all ready, planks on our shoulders and all expectancy. The covering party advanced in front of us, got into the garden, surrounding the building, saw no one, advanced and found the place empty ! the enemy had bolted according to custom and my chance for the Cross was gone. From there the advanced party made a dash across the road at a large place called the Mooti Mahal and took it, killing some of the enemy. This building was next to the Residency, the way was now open and in another house Sir James Outram and old Havelock with some of their staff, came out and met the Chief in the garden of the 32nd Mess House.

Next day the 2nd Brigade had some hard fighting and took what had been the Hospital and Barracks, but I know nothing about their proceedings. We went into the Mooti Mahal and were quartered there from Wednesday till Sunday night. I went into the Residency several times and was overjoyed to meet our fellows again and find so many of them well and jolly. The Mooti Mahal is a fine place, especially the zenana, the walls of which were adorned with magnificent mirrors, all the furniture was English mostly and in the garden were roses and jessamine in full bloom. The river flows under its walls and the view from the zenana up the river towards the Residency is extremely beautiful. The Residency buildings comprise the Residency proper, a large square house where Sir H. Lawrence lived, a Palace called the Ferad Bux, a little lower down the river, and a number of small houses all of which were occupied and enclosed in a circle of rough fortifications by our people. We remained in the Mooti Mahal (*i.e.*, our Brigade did) till Sunday, the 22nd. During those days the sick and the wounded, the women and children, were passed out of the Residency and sent under escort to the Dil Khusha where the Field Hospital was established. All the ammunition too and stores that could be carried away were loaded on camels and carts and despatched, and every preparation made for abandoning the place. All this was done under a heavy fire from the enemy and our casualties were numerous. To decline them they established two heavy batteries outside of the Mooti Mahal and commenced breaching the King's palace walls. On Sunday

morning the rebels who occupied the Observatory, a bungalow outside the compound of the 32nd Mess House, gave considerable annoyance to our people serving a mortar Battery in the compound, and I was ordered up with a party of 20 of our men to see what was going on and give assistance, if necessary. On getting into the Battery I found preparations being made for storming the Observatory, and soon after I got there a party of 20 men from the 84th and 40th Sikhs got over the compound wall and made a dash at the bungalow, which was only about 60 yards distant. The Europeans attacked on one side and the Sikhs from the other. The enemy kept up a heavy fire as they crossed the open and the officer leading the 84th was shot through the heart and his men got into confusion, but the Sikhs got in by the rear and the rebels then bolted into one of the rooms and fastened the door, and tried to escape through the window. This they were prevented from doing by some of the Sikhs who shot several as they came out. The Sikh bugler began sounding the advance and making signals to us for assistance, so I bolted over with my men and got into the house. I found it full of smoke, several dead natives lying about, the Sikhs in tremendous excitement firing wildly in all directions and at the door into the room where the fellows were barricaded inside. I got our men together and Parlett, the Sikh Officer, and I made a rush at the door and kicked it open, but our men didn't follow and the door was brought to again. Our men then began firing like maniacs at the door and as the English bullets went through the planks like paste board, they hit a lot of the natives inside and at last we forced the door and got in, and slew about 40 sepoys who were inside. The Sikhs then, according to custom robbed them of anything worth taking and set fire to their clothes. In a short time the house was full of smoke and smell of sepoy and as the fire reached their pouches they blew up one after another and you may fancy under what peaceful circumstances I passed that Sunday. I had the dead bodies thrown out of the window, indeed I had to take a hand at it myself to get the men to work at it. It was ghastly work and some of the young recruits turned quite sick over it. We barricaded the windows and put the place into as decent a state of defence as possible. About three in the afternoon the vagabonds had the cheek to come up and attack us, with an idea that they could retake the house. As they came close under the windows we had very good shooting at them and I had the satisfaction of knocking over a couple of them with one of our rifles. We held the post all that

day and at 12 o'clock at night the whole force retired from Lucknow. The retreat was uncommonly well conducted and the enemy were so completely deceived that they didn't know till the forenoon of next day that we had gone. Long before this we bivouacked at the Martiniere and Dil Khusha and from there on the 26th we returned to the Allum Bagh. They did not attempt to follow us. Sir Colin had accomplished what he proposed, had relieved the garrison in Lucknow and was impatient to return to Cawnpore where he arrived, as you will have heard long ago, just in time to save that place and defeat the Gwalior rebels.

CAMP ALLUM BAGH.

9th December 1857.

THE WAR GAME

BY LIEUT.-COLONEL J. McM. MILLING, M.C., *p.s.c.*

In Training and Manœuvre Regulations, 1923, it is laid down that War Games should not be used for minor tactics; that such instruction can only be adequately given on the ground or on a Sand Model. It is proposed to offer herein a method of using the War Game for the teaching of minor tactics, should any hardworked Commanding Officer be interested and able in these busy days to find time and inclination for such method of tactical study or instruction.

For the further benefit of those inexperienced in the running of a War Game and its many complications, and to whom a few additional guides to those already given in Training and Manœuvre Regulations may be of use, it is proposed to outline to a certain extent the organization and conduct of a War Game where the study of a situation embodies minor tactics only.

II.

Whilst referring always to Training and Manœuvre Regulations, it is suggested that the War Game should be clearly divided into four distinct periods:—

- (a) The opening Narratives—that is, the General Narrative for each side.
- (b) The Appreciations, preliminary Orders, and Instructions (or plans only) of both Commanders.
- (c) The period of gaining contact, requiring the normal scale (1"=1 Mile) map, and
- (d) The period of contact, requiring a map of considerably larger scale.

As regards (a) and (b), Training and Manœuvre Regulations are abundantly explanatory and nothing further need be said on the subject.

As regards (c), one would remark that problems of Time and Space, Administrative details, minor tactical situations affecting the Commanders and Leaders only, and such like, may here be usefully considered. This period may, however, be jumped, and that right up to the point where the forward troops begin to leave the smaller scale map in (c) and to come on to the larger scale map as in (d). This, it is hoped, will make itself clear as one proceeds.

As regards (d), this is the battle zone and one has to be very careful that the area of this map shall cover the course of events which are to comprise the coming battle. Here there is little difficulty, for the selection of the scene of action, and its extent, on the small scale map varies in no way from the procedure which must be followed in producing a fight on the ground itself. For, whereas in the latter one is given, or selects, the battle area *on the ground* and then fits the Exercise to it, so in the former one merely selects the battle area *on the map* and fits the Exercise in like manner.

III.

Having then fixed the battle area on the small scale map, about a square inch or so, the next thing is to produce it in the larger scale. This is easy if the 6" to 1 Mile Map is available. If it is not, and it is desired to practice commanders under local conditions, then an enlargement is definitely necessary. But for the evolutions of scouts or the smaller units, even the scale of 6" to 1 Mile is somewhat small and may usefully be increased. It follows, therefore, that an enlargement must practically always be made, and it is recommended that this be not less than twelve inches to the mile.

It should be noted that, in making the enlargement the main point is that all such features, contours, and details as appear in the small scale map must be similarly reproduced in the enlargement. These in themselves will not be sufficient. Should the enlargement be made from a 6"—1 Mile Map much extra detail will thus already be there, but, even so, still more will probably be required. The point, however, is that this extra detail need in no way represent the true nature of the countryside as it exists, and can, therefore, be purely imaginative. For, in actual Exercises on the ground the small scale Map in use can only be indicative, and nothing else, save what is obtained from æroplane photos, previous personal knowledge, etc., will be known till the ground itself is actually reached. So, in like manner, in War Game Exercises nothing else will be known till the larger scale map is reached; so that, whether these extra details be fact or *fiction*, they can have no bearing on the Game before this period is reached. All such extra detail must, however, appear with the greatest accuracy on all maps—a highly important point.

It must be realized too, that the putting in of this imaginary extra detail needs no great labour, nor tax on either the ingenuity or imagination, whilst it is further suggested from a comfort and convenient

point of view that the map should be enlarged in breadth to that of about one or a couple of ordinary barrack room tables, in any case, not greater than the area of the tables to be used in the War Game.

IV.

It is recommended that the War Game shall be run under one of the following three conditions ;

- (a) where the commander of either side fights his own battle entirely, and knows nothing of his opponent's dispositions or plans, other than he is able to deduce from the General Narrative issued to him, and the subsequent course of events and information received during the Game, or,
- (b) where the action of one of the Commanders, though normally carrying out his moves in accordance with the situation given him, is mainly regulated by the Directing Staff, or,
- (c) where one side is in the nature of a Skeleton force ; and its action is indicated to the other side purely by narrative and fire indication.

V.

The guiding principle of the layout of the room in which the War Game is to be played is that as the situation begins to cause deployment, so each Unit or Sub-Unit Commander (Section commander in the case of a Platoon Exercise ; Platoon Commanders in the case of a Company Exercise) must have his own or part of his own enlarged map and compartment, and thus become isolated from his Commander and the other Sub-Unit Commanders, in much the same way that he would in an exercise on the ground.

To accomplish this there should be, for a Company, five separate rooms or compartments, with an enlarged map in each. But in actual fact three are found to suffice—one for the Company Commander, and two for the four Platoon Commanders as their various Platoons become deployed.

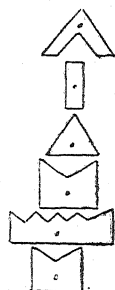
One would like to explain here that in the case of (a) and (b) Para. VI, the control of both sides, working on the isolation principle, is found to be very complicated, and it is recommended that one Commander be allowed to run his battle entirely himself (his Sub-Unit Commanders merely being present with him) on one single enlarged map. Thus only one room or compartment is required for him, and another for the Directing Staff, making a total of five in all.

From a point of control, too, compartments as against rooms are recommended, so that they can be closer together. The chances of connected information being overheard are very small, and should in any case be eliminated quite easily by a call on the sense of fair play. A large sized room, gymnasium, or drill hall is therefore required, the compartments being formed by means of screens, or blankets slung on ropes, etc.

In laying out the compartments it is recommended that the one for the Directing Staff be in the centre, the three for the one force and the one for the other force being situated on either side. From the point of view of spectators, there is no need for more screening than is absolutely necessary to produce the desired isolation. In each compartment there will be a table, with a copy of the enlarged map pinned to it, form and chairs. A clock (designed on a blackboard with moveable hands) must be displayed where all can see it, in order to denote times of moves.

This latter is simpler than the written up details of timing, dates, etc., for the larger War Games, *vide* Training and Manœuvre Regulations.

As regards the moves and representation of the situations of Units, coloured pins can be utilized. It is recommended in the action of a Company, say, that though sections should be represented, only Platoon Commanders should move them—this again from point of control and complication. A more realistic method of depicting the units is as follows. The pieces can be cut out of thin sheet brass or tin, and coloured with enamel in any pioneers' shop. A small metal stump should be welded to each to facilitate movement. The following diagrams of pieces are drawn to suggested dimensions :—



Red (blue) to represent Sections deployed.

Red (blue) to represent Sections in File.

Red (blue) to represent Lewis Guns.

Red (blue) to represent Section M. Gs.

Green to represent hostile Rifle Fire.

Green to represent hostile automatic Fire

Commanders, Company Headquarters and transport can be represented by different coloured flags or pins. Red and blue casualty screens ditto.

This completes the paraphernalia.

VI.

For an Inter-Company Game it is suggested that the Directing Staff consists of:—

- (a) The Director.
- (b) Two Assistant Directors.
- (c) Two Chief Umpires.
- (d) Three or four Umpires.

The duties of the Director are as in any ordinary Exercises. Those of the two Assistant Directors (more or less confined to the Directing Staff Room or Compartment), are to control the moves of the opposing forces, as recorded for them on their enlarged map at the end of each clock hour period by the umpires, in conjunction with the Narrative of events as given to them by the Chief Umpires. They will adjudge whether the moves were possible, setting back the situation of the pieces where necessary and indicating to the Chief Umpires the new situation and details of fire effect. They will decide the various clock movements.

The duties of the Chief Umpires are (a) to keep the various Unit Commanders aware of the situation, assisted if need be by their Umpires, and (b) to keep the Assistant Directors aware of the situation.

The duties of the Umpires are to record on the Directing Staff Map the completed moves at the end of each clock hour period; to regulate on Commanders Maps such alteration of situation as decided by Directing Staff, and to assist the Chief Umpires wherever so required by them.

VII.

To explain more easily the suggested sequence of events in the action of the War Game itself, the outline of an actual Game as carried out last Training Season is taken. The Commander of either side was issued with a General Narrative, and asked to produce his Appreciation and plan.

One side represented a party of raiders about 100 strong led by a modern Outlaw, the force adequately impeded by the booty problem,

and ignorant of the immediate presence of the other side, which was an Infantry Company with a platoon of Machine Guns in the process of carrying out a "flag march."

As a result of the plans adopted by the two Commanders certain adjustments to the situation became (as will practically always be the case) necessary to get the fight staged. The raider was therefore given some indirect information about the Company of Infantry, and asked to give his complete dispositions as he considered they would be when the intended raid was completed and his convoy of booty was just clearing a given map reference, and to state the hour. These dispositions being considered practicable were agreed to.

The purpose of the Exercise being that the Company should be the attackers, the conditions (in view of the Company Commanders' Plan, not given here) as they now stood reversed matters. It became necessary, therefore, still further to adjust the situation, and a second Narrative had in consequence to be prepared for the Company Commander whereby he was suitably, and without digressing from tactical possibility, delayed and so prevented from getting, as he had very correctly planned, right astride the obvious alley way of withdrawal for the raiders, and the only one which could be got on to the enlarged map.

VIII.

The War Game opened with the two Commanders and their respective sub-unit commanders and leaders in the compartment allotted to each Commander. The Commander of the raiders was asked to set his pieces as previously decided by him, as at 06-30 hours. The Company Commander was given the second Narrative and asked to give his orders and dispositions resulting from it, and place his pieces also as at 06-30 hours. Seeing too, that, had he been on the ground itself, he would have been able to view the scene of action and actually been able to carry out a reconnaissance of the ground, he was permitted to use the enlarged map.

As a result of these two dispositions, both sides claimed possession of a certain highly important Hill. But as the raider Commander claimed to have been in possession by 05-45 hours, whereas, owing to his unforeseen delays, the Company Commander felt that he could not have got his two forward Platoons moving beyond the edge of some maize fields half a mile short of it before 06-15 hours, it was ruled that possession of the hill was to the raiders.

It will be seen that here the Game opened at the point of contact, and the Directing Staff were forced, even at the opening situation, to order a re-disposition of pieces. This may or may not occur as the case may be. It just depends on the setting of the exercise. But exactly where the point of contact occurs, so long as it occurs on the enlarged map, is in itself quite immaterial. The 06-30 hours situation as adjudicated by the Directing Staff was, therefore, transferred to the two Commanders' Maps, their pieces being readjusted where necessary, such enemy visibility or fire effect indicated on both maps by means of the opposite coloured, or green fire indication pieces, and the latest situation report given to them.

IX.

Nos. 9 and 10 Platoons of the Infantry Company being, in accordance with the 06-30 hours situation, now deployed, their respective Commanders were transferred to the two other compartments, where their pieces were set for them by the Umpires in accordance with the 06-30 hours situation. The clock was put on by a quarter of an hour, and they were instructed to place their sections as they considered they would be at that hour. These moves were then translated on to the Directing Staff Map, as were also any variations in the dispositions made by the two main Commanders, such explanation of moves being explained by the Chief Umpires, and the Assistant Directors then made their decision as in the previous situation.

It should be noted here that the Commander of the Raiders was allowed one compartment and one enlarged map, and, though he had all his platoon Commanders with him, actually carried out all moves of his pieces himself. In this case, too, it was found possible to give him a free hand. This, for lack of space, is as far, it is thought, as it should be necessary to go. The succeeding procedure is on exactly similar lines, the same, in fact, as in any normal War Game. Actually here the fight was carried up to point where the raiders, after a severe engagement, just got back across the frontier after considerable casualties with a loss of half their mules and booty.

The following further points, however, are suggested for guidance :—

1. No Commander or Leader must be allowed to speak to the other, or another, once they have become, and so long as they remain, isolated—that is out of speaking or shouting distance in the Field.

2. All communication must be as in the Field, and all messages must pass through a Chief Umpire or Umpire delegated for that duty. Nor should the messages be delivered to the addressee until such time as it is adjudged they could have been delivered—signal, runner, etc.—and considering, too, the fire situation.

3. Everything that a Commander or Leader could see of the battle must be depicted on his map by the Umpires, *i.e.*, where, say, advancing on a broad front two platoons are deployed, then each Platoon Commander's Map will have placed on it, in addition to his own pieces, those of the other Platoon (if he should be able to see them) of rear Platoons if needs be, the location of Company Headquarters, and enemy fire indications.

4. The Company Commander should be permitted to visit his Platoon Commanders' tables and watch from the rear any of their movements, but must not be allowed to converse unless claiming to be with that Platoon Commander and so permitted by an Umpire.

5. Red and blue casualty screens may be employed and regulated in the same manner as on the ground if so desired.

6. It often saves time and facilitates matters generally if the Directing Staff can indicate to Chief Umpires the general regulation of the next clock hour situation. It means that these latter can control much of the moves of pieces at the time, rather than waiting for only such readjustments as the Directing Staff may order later. In so doing umpiring can be usefully practiced and taught, being carried out in exactly the same manner as it is in the Field.

X.

As one has already tried to make it clear, there is nothing new in the so-called Junior War Game itself, only, in the disposition given here, a rather different manner of using it. Its purpose is merely a further move in the direction of elevating the military mentality of the junior commanders. Minor tactics are dependent entirely on the understanding of major tactics. The Commander or Leader, to be able to apply his minor tactics in the field, must have a working knowledge of major tactics. His instruction is normally confined to lectures, T. E. W. T.'s and demonstrations on models. The former usually wraps his brain more closely than ever in padded felt, the latter demands a gift of imagination which as often as not is entirely

lacking. The map, however, is a hard and fast fact, and generally fairly well understood by even the most junior leaders; the advantage of its use in the War Game over a T. E. W. T. is that it pins the individual to a definite decision which he cannot talk round, moreover, it is an excellent lead to expertness in map reading.

The days of brute courage are gone. Under circumstances of modern war brute force must give way to science. Drill, the stand by of the Napoleonic era, is no longer an element of the battlefield. Modern weapons, and the manner of fighting they demand, call for deployment—the isolation of the individual, where brute courage alone must fail. This view point has already been considerably thrashed out. To-day it is initiative combined with courage that one must have, the individual who can think for himself, the commander who can command with knowledge.

To this end the manner of using the War Game demonstrated here is, in the writer's opinion, of considerable value. Its potentialities are enormous.

It was first used to test out the fighting and administrative organization of a Local Mobile Column which had been in existence for some years. The result was that the Scheme had to be completely scrapped and a new and purposeful one evolved. It can be used equally well for all the fighting branches of the service, including the mechanised arms, and particularly in the Drill Hall of the Territorial Units.

It provides a valuable means of studying ground tactics under cover, where inclement weather so prevalent in England, or the excessive heat of the tropics, precludes work out of doors; of teaching the purposeful study of the map; and of map reading in general. It is one of the best methods the writer knows of for teaching the art of umpiring. It is further, in his humble opinion, a far more exacting and reliable method of testing tactical and administrative knowledge and ability in the individual than any T. E. W. T., and can be most usefully so applied.

LETTERS TO THE EDITOR.

A MATRIMONIAL TANGLE.

SIR,

Reference the case of P. B. Rifleman vs. Queen of the Battlefields and R. Arty Llery.

The account given by Auspex * of this case was not quite complete, as further evidence was adduced. I give here a summary of the judgment in that case. Most of the salient facts are touched on, and it may interest your readers.

“ The plaintiff’s case rested partly on the plea of incompatibility of temperament ; the plaintiff however also alleged undue intimacy, amounting to misconduct, between the respondent and R. Arty Llery, the co-respondent. He further pleaded that the co-respondent had exerted undue influence over the respondent to such an extent that his domestic life had been ruined. His particular grievance was the respondent’s craze for a fire plan which, he alleged, she had acquired from Mr. A. Llery when he had accompanied the plaintiff and his wife on a business tour to France some 19 years ago. He stated that he had to have a fire in summer when he did not want one, and that in winter the foundations of this fire were so carefully laid—and discussed at such length—that he derived no benefit from it until too late ; that, where a small fire quickly lit would have warmed him in the first place, he frequently found that even a furnace was insufficient to warm his frozen body when at long last it started to function. He had frequently begged her to be content with less preparation and to reserve her efforts for suitable occasions. The evidence supports the plaintiff’s plea.

The respondent brought a counter charge of misconduct with Miss Louisa Gun (a cousin of the respondent). This counter claim is not upheld by the evidence and it is quite clearly proved that though Miss L. Gun did undoubtedly frequent the house, it was only for the purpose of lighting small fires quickly while the respondent and Mr. Arty Llery were discussing the question of a bonfire in the Drawing Room. So far from the plaintiff falling in love with Miss L. Gun it

* A Matrimonial Tangle, published in the U. S. I. Journal for July 1932.

was proved that he had frequently stated that she was not as good as she ought to be, that she was troublesome and heavy and that she should be improved.

The respondent further pleaded that, during the visit to France mentioned above, she and Mr. Arty Llery were entirely responsible for the support of the plaintiff who was himself entirely without visible means of support. The plaintiff in the main acknowledges this, but pleads that it was due to his bad education, and maintains that now he is in a much better position. He also states that nowadays his business frequently takes him into mountainous country where the respondent's extravagance in the use of powder demand a scale of paraphernalia and transport which it is unreasonable to expect him to supply.

On all the above points judgment goes to the plaintiff. His temporary inability to support himself is now a thing of the past, while the respondent appears bent on continuing her liaison with the co-respondent.

The respondent however produces a further charge of undue familiarity between the plaintiff and a younger sister of Miss L. Gun. She cannot however give her name or produce her in Court. The plaintiff denies this. I know that he has stated that, if this person is in any way as attractive as has been stated, he would elope with her to-morrow. But this cannot be held to prove a past or present intimacy, and again on this point judgment goes to the plaintiff."

A decree nisi was pronounced.

I have, etc.,

"LEX."

MILITARY NOTES.

FRANCE.

Direction des Fabrications d'Armement.

By a decree dated 29th April, 1933, a new directorate has been created which will be responsible for the manufacture of all armaments, munitions and war material both in peace and war, and for the preparation and speeding up of industrial mobilization.

It revives in peace an organization which will fulfil, on a small scale, the rôle of the Ministry of Armament in the Great War.

It will include various technical organizations formerly under the artillery and other directorates.

According to reports General H. A. M. Saltet de Sablet d'Estières, *Inspecteur Permanent des Fabrications de l'Artillerie*, has been appointed *Directeur des Fabrications d'Armement*.

The services allotted to the new directorate will provisionally continue to be operated either by personnel belonging to, but seconded from, the artillery, or by officers of other arms having the necessary qualifications and similarly seconded.

No increase in expenditure will be involved.

Appointments.

General J. C. Duchéne, member of the *Conseil Supérieur de la Guerre*, has been appointed *Inspecteur Général Adjoint* of National Air Defence.

Conseil Supérieur de la Guerre.

The following two representatives of the army of the air have now been introduced into the *Conseil Supérieur de la Guerre* as advisory members on the same footing as the representatives of the navy :—

The Inspector-General for the Army of the Air.

The Chief of the Staff of the Army of the Air.

When the council is called upon to give an opinion on questions affecting the army of the air, the above mentioned officers will be allowed a vote.

Conseil Supérieur de l'Air.

The following new members are introduced into the *Conseil Supérieur de l'Air* in an advisory capacity :—

- (a) The Inspector-General of National Air Defence.
- (b) Two representatives of the army :
 - (i) The Inspector-General of the Army.
 - (ii) The Chief of the General Staff of the Army.
- (c) Two representatives of the Navy :
 - (i) The Chief of the Navy Staff.
 - (ii) A member of the *Conseil Supérieur de la Marine* (appointed by the Minister of Marine).
- (d) A representative of the Colonial Ministry :
The General Officer Director of Military Services.

When the council is called upon to give opinions on questions affecting the national air defence, the army, the navy or the colonies, the representative members will be allowed a vote in the council.

As a result of the above two measures, the liaison between the army and the army of the air will be considerably strengthened.

Re-organization of the Air Arm.

A decree dated 1st April completely reorganized the French Air Force and laid down new general principles for its employment and organization. It is now to be known as the Army of the Air (*L'armée de l'air*), and is brought much more into line with the army as regards command, training and territorial organization.

In place of Air Forces strictly specialized for particular duties, the Army of the Air is to be organized, trained and inspected with the object of rendering it capable of taking part in air operations, in combined operations with the Army and Navy, and in territorial air defence.

Note.—The units of the Fleet Air Arm and shore based Naval co-operation units are definitely exempted from this decree, only the fighters and torpedo bomber squadrons of the hitherto autonomous Naval Air Force are included.

Conseil Supérieur de la Guerre.

Général de Division J. C. Duchéne, Member of the *Conseil Supérieur de la Guerre*, will be retained on the active list for one year till 17th March 1934, and is placed *hors cadre*.

*Appointments to commands.**(a) French West Africa.*

Général de Division A. T. Thiry has been appointed G. O. C. Troops, French West Africa, *vice* General Freydenberg, tour expired.

(b) 19th Army Corps, Algeria.

Général de Division A. P. C. A. Nogués, has been appointed G. O. C. 19th Army Corps, Algeria, *vice* General Georges, recently appointed to be a member of the *Conseil Supérieur de la Guerre*.

Appointment of military attachés.

Colonel Mendras, Professor in Artillery at the *Ecole Supérieur de Guerre*, has been appointed Military Attaché, Moscow, and Major Simon, formerly Head of the Russian Section of *Deuxième Bureau*, has been appointed Assistant Military Attaché, Moscow.

Bounties, Foreign Legion.

By a Decree, dated 7th April, the bounties awarded to soldiers of the Foreign Legion have been amended—considerably to the detriment of the soldier.

Whereas previously a man serving on a normal 5-year engagement received a sum of 1,000 francs on enlistment plus an additional 400 francs, he now only receives 600 and 400 francs, respectively.

For non-commissioned officers and men re-engaging up to 10 years, a sum of 300 francs is now payable for each year's service, instead of sums of 800 francs for senior non-commissioned officers and 600 francs for corporals and private soldiers.

Fusion of Civil Air Lines.

A Decree, dated 1st June, provides for the formation of a new company from 1st September 1933, to operate French Air Lines under semi-State control.

The main result of this re-organization will be a great saving to the Government in subsidies, which in 1932 reached a total of 204 million francs. The subsidy to the new company is to be 150 million francs in 1934, and will be progressively reduced, until in 1937 and subsequent years it will stand at 135 millions.

The company is under contract to the Government to maintain a fixed number of services on twenty-one given lines, any long and

unnecessary stoppage entailing cancellation of the agreement. There will be services of varying frequency to the great majority of European capitals and important towns, as well as to those of North Africa. In addition, two long-distance weekly services are worthy of note :—

- (a) Marseilles—Beirut—Baghdad—Saigon.
- (b) Casablanca—Dakar—Natal (Brazil)—Rio de Janeiro—Montevideo—Buenos Aires—Santiago.

The Atlantic crossing from Dakar to Natal is at present carried out by boat, but it is hoped to institute a trans-Atlantic air service in the future.

Rhone Development Scheme.

A general constituent meeting of the *Compagnie Internationale du Rhône* was held at Lyons on 27th May in the presence of M. Herriot. About a quarter of the total authorized capital of 240 million francs has now been paid up and work is to begin shortly on the scheme, which will be carried out by stages as follows :—

- (i) The construction of a hydro-electric power station capable of developing 350,000 kilowatts and supplying Paris and Marseilles as well as the surrounding country and the P. L. M. railway.
- (ii) The irrigation of a large area in Provence and Languedoc.
- (iii) The development of the Rhône with Swiss assistance, in order to enable ocean-going steamers to reach the Lake of Geneva.
- (iv) The development of Lyons as a first class industrial port.

Paris—Marseilles—Algiers Service.

The new marine railway station at Marseilles was opened on 15th June. This enables a saving of five hours to be effected on the journey from Paris to Algiers. The *Compagnie Transatlantique* are constructing three new ships for this route, and improvements are to be carried out in the port of Algiers which will include three new moles and the extension of the outer breakwater.

ALGERIA.

Oujda Nemours Railway.

The first section of this railway from Zoudjel Beghal to Sidi-bou-Djenane, will, it is hoped, be completed and opened to traffic towards

the end of 1933. Depots are being built at the latter place for the ore from the Moroccan mines, and transport from there to Nemours will be effected by motor lorries until the whole line is completed.

Telephone service between Algiers and Paris.

On 11th March the first direct telephone call was put through between Algiers and Paris on the new service which is to be open to the public shortly.

Coast defence.

During the discussion in the Chamber on the marine budget for 1933, attention was drawn to the fact that the guns removed from the Algerian coast defences during the Great War and transported to France, had never been replaced. In consequence these defences were totally inadequate.

BELGIUM.

Modification of the uniform of the Chasseurs Ardennais.

In future the collar patch of this regiment will be dark green instead of red as in the remainder of the infantry, and will carry a boar's head. The non-commissioned officers and men will wear a beret (*bonnet Basque*) instead of the ordinary infantry head-dress.

Re-organization of Army Committees.

A Royal Decree has just been published re-organizing the Higher Committee and the committee of the various arms, and constituting in addition similar committees for the Air Force, for the *Corps des Transports* and for the various services of the army (intendance, medical, veterinary). The composition of the committees will be decided by the Minister of National Defence, and they will meet whenever he considers it advisable. The primary duty of the committees of the various arms and services is to pronounce on the general fitness of officers for promotion to major, lieutenant-colonel and colonel. The Higher Committee has the same duty up to the rank of lieutenant-general, and in respect of appointment to the command of divisions and corps. At the same time, any other question may be submitted to the opinion of these committees at the discretion of the Minister of National Defence.

New Territorial command.

By a decree dated 7th April, 1933, a fourth territorial command has been created. It will comprise the provinces of Luxembourg and Namur—hitherto part of the third territorial command. Its commander will be directly under the Minister of National Defence and his functions will include the special study of the defence of his provinces and of the fortified position of Namur.

The troops for the new command will include only the Fortress Regiment of Namur and the 10th Regiment of the Line (*Chasseurs Ardennais*). No field artillery will be allotted to it.

Lieutenant-General Verhavert, commanding 2nd Cavalry Division at Namur, has been selected for the new command. He was originally in the artillery.

GERMANY.

Scheme for national physical training.

At a Federal Cabinet Meeting on 3rd April, it was decided to transfer the control of the scheme for national physical training (*Jugendertüchtigung*) to the Federal Ministry of Labour, which already controls the Voluntary Labour Camps, with which the youth movement is closely connected. Since its inception last year, the movement has been under a National Board of Control, which has proved in practice too unwieldy for its task, and the real organizing work has been done by a small energetic executive committee. This committee has some 12 branch headquarters distributed throughout Germany and East Prussia, through which it controls the 16 to 18 training camps which already exist.

There is already a tendency to devote some of the camps to some special form of Wehrsport (Defence Sport). A camp near the Kiel Canal is devoted to nautical training, another near Berlin is to follow suit, while a third is apparently to specialise in mounted Wehrsport for the benefit of the various Reit und Fahr Vereine (riding and driving clubs).

By the end of March four complete courses of three weeks' duration had been held and during April a course was specially held for university students.

Having carefully studied the experience at their disposal, the new chairman and committee do not propose to make any major alteration to their programme. Their object is to provide assistant instructors in Wehrsport for the associations and clubs, and they are satisfied that a period of three weeks is just long enough to demonstrate how instruction in Wehrsport should be given, provided the candidates are sufficiently adept themselves. There have been very few failures at the passing-out examination at the conclusion of courses to obtain certificates qualifying the holders to act as assistant instructors.

The scope of the examination, which is divided into three parts is as follows:—

1. Physical exercises.

- (a) 100 metres (time limit 15 seconds).
- (b) Long jump (distance 4 metres).
- (c) Club throwing (distance 30 metres).
- (d) Putting the shot weighing 16 lb. (distance 9 metres).
- (e) 3,000 metres (time limit 14 minutes).
- (f) Swimming 300 metres (no time limit).

2. Small calibre rifle shooting.

Firing 3 practices at 50 metres range over open sights without any aids.

3. Field sport.

- (a) Marching 15 miles carrying a pack weighing $27\frac{1}{2}$ lb. in $5\frac{1}{2}$ hours.
- (b) Tests of eyesight.
- (c) Map reading and compass tests.
- (d) Transmitting verbal messages.
- (e) Making a written report on a site for a post.
- (f) Judging distance.
- (g) Describing and appreciating a piece of ground for an advance or withdrawal.
- (h) Camouflage.
- (i) Use of ground.

The candidate is also judged on his bearing and conduct during the test.

The activities at the camps include "Wehrsport" (defence sport) and Geländeübungen (field exercises).

Under the term "defence sport" are included—

- (a) Drill and physical training.
- (b) Field exercises and pack marches. (Standard pack march of 16 miles carrying over 50 lb. equipment).
- (c) Judging distance.
- (d) Miniature rifle shooting.
- (e) Map reading and compass marches.
- (f) Tactical appreciation of ground and the use of glasses.
- (g) Sand table instruction in tactics.
- (h) Messages and reports.

Under the term "Field Exercises" are included—

- (a) Scouting.
- (b) Attack.
- (c) Defence.
- (d) Withdrawal.
- (e) Pursuit.
- (f) Surprise and ambushes.

New German field uniform.

The *Reichswehrministerium* have announced the introduction of a new German field service uniform. (A photograph of the new German uniform appeared in the "Daily Mail" of 22nd June). It is announced that the new type of jacket will be introduced as soon as the stocks of the old uniform have been exhausted.

Experiments have been carried out for some time and commanders of all units concerned have been unanimous in preferring the British type of jacket to any other. The new tunic, which is made of a material similar to gabardine, is much looser in cut than the one at present in use and is designed to give as much freedom as possible. The collar of the jacket will normally be turned up and will be worn with a kind of stock which buttons on at the back. It can also be worn open. The tunic has a slit at the back and is provided with breast and side patch pockets. The latter have been introduced in order to permit of the men carrying extra ammunition, message pads, &c. For walking out and on

ceremonial occasions, the present walking-out tunic and cloth trousers will be retained without any alterations. The present type of marching boot will be improved by introducing lacing at the instep and by providing adjustable straps. In this way it is hoped to eliminate the friction on the heels. A ribbed stockinette shirt will be issued for wear with the new type uniform, which will be worn on manœuvres this autumn.

TURKEY.

National Defence Budget, 1933-34.

The National Defence Budget for 1933-34 is made up as follows :—

		£T.
Army	.. ..	32,373,640
Aviation	.. ..	943,000
Navy	.. ..	3,775,560
Military factories	.. ..	2,955,800
Cartographical section	.. ..	603,505
Total	.. ..	40,651,505

To this total should be added a sum of £T. 9,835,242 included in the Public Debt Vote for the redemption of bonds in respect of military supplies.

The total expenditure allowed for in the National Defence Budget shows an increase of £T. 427,240 over that of the previous year.

ROUMANIA.

Civil Mobilization.

A law has recently been passed in Roumania dealing with civil mobilization in time of war which, according to the public decree, " has as its object the making use of the whole of the forces and resources of

the country to ensure national defence." The following is a summary of its more important provisions :—

- (a) All inhabitants of the country liable to military service become part of the armed forces. Inhabitants who are not liable to military service and who have reached the age of 18 years are liable in time of war to be called up for employment on some service connected with national defence.
- (b) Any property belonging to the inhabitants of the country may be requisitioned, and industrial establishments may be obliged to carry out any work required in connection with national defence.
- (c) Public services, establishments, concessions, &c., belonging to the State or to private persons which are required to work in the interests of national defence, shall be organized in accordance with appropriate mobilization regulations, and the provision of cadres of personnel necessary for working in time of war shall be carried out in peace time.
- (d) Each Ministry shall prepare a mobilization plan and an officer of the General Staff shall be attached to each Ministry to ensure the co-ordination of its work with the requirements of the Ministry of War.
- (e) Every year each Minister shall draw up a report dealing with the preparation for war of his Department and shall forward it to the Superior Council of National Defence. The latter will then draw up a general report regarding the national preparations for war, for submission by the Prime Minister to the King.
- (f) The administrative and economic organization of the country for war shall be carried out within each Army Corps District by Army Corps Headquarters, assisted by the local prefects and mayors, special offices being established in peace time in each district and municipality to carry out all preparatory work in connection with civil mobilization.
- (g) The passing of the nation from a state of peace to a state of war shall be ordered by Royal Decree.

Proposed Danube Bridge.

For some time past intermittent discussions have taken place between the Governments of Roumania and Yugoslavia regarding the proposal to build a bridge across the River Danube, linking the railway systems of the two countries. From a statement recently made by the Yugoslav Ministry of Communications it would appear that this project has now been definitely approved. It is proposed to build the new bridge at a spot about 30 miles below Turnu Severin, and a new railway line will be constructed to connect it with the existing Roumanian railway system. The cost of construction is estimated at about 500 million lei, which is to be shared between the two countries concerned.

SPAIN.*Co-ordination of air services.*

By a decree issued on 6th April, 1933, the Spanish Government authorized the formation of a Directorate-General of Aviation.

Hitherto, the air services of Spain have been branches of the navy and army, respectively, each having its own air arm purely for co-operational purposes, there being no apparent intention of employing aircraft in an independent rôle. The present decree legislates for—

- (i) An independent air force (for bombardment purposes).
- (ii) A defence aviation branch.
- (iii) An army co-operation branch.
- (iv) A naval co-operation branch.

The decree not only authorizes the formation of a Directorate-General of Aviation which is to be responsible for civil as well as military aviation, but also sanctions the creation of a "Higher Air Council" whose functions, however, are not defined. This body is apparently quite distinct from the Directorate-General of Aviation, and although the Director-General of Aviation is to be one of the members, the chiefs of staff of both the army and the navy, as well as three political officials, are also members of this air council.

In the matter of command it is of interest to note that the air forces are to be under a military or naval officer to be known as the "Chief of Air Forces". This officer is to have direct and full command of all branches of the air forces except that, for purposes of operations

and discipline, the army and navy branches are to come under the military or naval command to which they are affiliated.

Formation of Train Corps.

A Decree of 25th March provides for the gradual organization of a Train Corps in the army. It will be responsible for the road transport of troops, animals and material, also for supply and evacuation and all other transport requirements which the different units and services cannot carry out with the means at their disposal. Transport duties will, therefore, in future be carried out by one service, instead of being divided as hitherto among the intendance, medical and other services; all purely transport units and elements now with the latter will be withdrawn, and they will be confined to their technical functions.

A Directorate of the Train Corps will be formed at the War Ministry under a lieutenant-colonel of the artillery or engineers, to study and develop principles governing the technical preparation of officers, the upkeep, repair and types of material, and management of schools and parks. There will also be an Inspectorate attached to the Under-Secretariat, responsible for regulating the duties, training and recruiting of the corps.

The smallest unit of the Train Corps will be the section—two, three or more of which will form a company. Sections will be entirely mechanized, horse drawn or pack, while companies may be homogeneous or mixed.

Each division and each island command will have a mixed company of the Train Corps; the cavalry division will have a M.T. Company and the two Circumscriptions of Morocco a Mixed Train Group each.

In peace, train units will in principle come under the orders of the G.O.C. the formation to which they are attached, but the companies in Spain itself will be formed for command and administration into three groups with headquarters at Madrid, Saragossa and Valladolid, respectively. Peace establishments will be limited to those necessary for training and garrison duties, since in war the material will be almost entirely requisitioned.

Then necessary officers will be got from volunteers and supernumeraries from other corps.

MOROCCO.

SPANISH ZONE.

Autumn Manœuvres.

Manœuvres will be carried out in Morocco during September, in which it is estimated that some 23,000 men will take part.

High Commissioner's visit to Madrid.

Senor Moles, High Commissioner in Spanish Morocco, has arrived in Madrid in order to lay certain schemes before the Government dealing with road construction, irrigation works, and grants to Spanish farmers in the zone.

ITALY.

The Military Budget, 1933-34.

The estimates for expenditure on the armed forces in 1933-34, as compared with those of the preceding year, are as follows :—

..				1932-33.	1933-34.
				million lire.	million lire.
Army	..	..	..	2,961	2,621
Navy	..	..	..	1,539	1,359
Air Force	..	..	..	754	696
Total				5,254	4,676

It will be seen that the reductions made are relatively greatest in the army and smallest in the air force. The total of 4,676 million lire represents approximately 22 per cent. of the whole national budget.

Progress in mechanization.

The Minister of War stated recently that all heavy and medium artillery batteries in the Army have now been mechanized, and that mechanization had also been applied to certain regiments of field artillery. A cavalry regiment has, as an experimental measure, been equipped with the new "Carri Armati Veloci," which are light two-man armoured machine-gun carriers.

Commemoration of Italy's entry into the war.

In connection with this year's celebration of the anniversary of Italy's entry into the Great War, Signor Mussolini has himself written an article for publication in the Press, dealing with Italy's contribution to the victory of the Allies. The article is largely composed of extracts from a book by General Alberti, in which the author has collected a vast number of quotations from foreign sources, testifying to the valour of the Italian troops and to the importance of the operations on the Italian front. The evidence cited is taken for the most part from despatches, books and other writings by prominent German, Austrian and French military leaders.

YUGOSLAVIA.

Compulsory Physical Training.

A new law compelling all young people in Yugoslavia up to the age of 20 to take part in compulsory courses of physical training has been passed by both Houses of Parliament and has been signed by the King. Unless specially exempted, every boy and girl in the country must belong to a gymnastic association and attend the courses in physical instruction in the State schools or attend special courses arranged by the municipalities. Anyone who refuses to obey the instructions and to practise regularly the exercises prescribed, will be liable to fine or imprisonment. Parents who dissuade or prevent their children from practising physical culture are also liable to severe punishment.

The Army Budget.

The total Army Budget for 1933-34 amounts to 1,715 million dinars as compared with the previous year's total of 1,828 million dinars. Nearly half the apparent decrease of 113 million dinars is accounted for by a reduction in supply items which has been made possible by the fall in the prices of rations and forage.

The strength of the army for 1933-34, excluding the Frontier Guard, is shown in the budget as:—

Officers	..	..	8,150
Permanent Non-commissioned Officers	..	..	9,501
Corporals	} Conscripts	..	{ 7,000
Privates			
Students at Military Schools	..	..	3,783
Grand total			111,434

U.S.A.

The Civilian Conservation Corps.

One of the items in President Roosevelt's plan for dealing with the unemployed is the enrolment of 275,000 men between the ages of 18 and 25 in a special corps called the "Civilian Conservation Corps" for work in the national parks and forests. Orders for the formation of this corps were issued on 5th April when the President directed that 275,000 men were to be at work in 1,300 forest camps by 1st July.

The actual selection of the men for enrolment is carried out by the Labour Department, but all other work connected with the scheme has been handed over to the War Department. The newly enrolled men are taken over by the Army, medically examined and placed in army camps or barracks where they undergo physical training to make them fit for work, and are subjected to discipline under the charge of army officers. The Department of Agriculture decides where the men are to work, but the forest camp sites are elected by the Army, and the camps established by advance parties under army officers. After the camps have been established, parties of men are sent from the conditioning camps to start work.

As the centre of unemployment is in Ohio and most of the forestry work is in the Western States, a transport problem of considerable magnitude is involved.

It is estimated that 5,000 officers will be required for work in the various camps, and others will be required for supply work and hospitals. As many regular officers as possible are being employed on the scheme, and in order to make a large number available, all army courses are being concluded a month earlier and large numbers of instructors on duty with the National Guard and Organized Reserves are being recalled. In addition 320 Naval and Marine Corps officers and 169 naval surgeons have been allotted for duty under the War Department, and 1,200 Reserve Corps officers are being called to active duty. The latter are expected to derive special benefit from this opportunity to command men, an opportunity which the reserve corps officer does not usually get owing to the lack of enlisted reserves.

As the President has ordered the men to be at work by 1st July, enrolment and preliminary training has had to be carried out at high speed. Up to 5th June 217,000 men had been enrolled in the corps and men were coming in at an average daily rate of 9,000.

Facilities for recreation are being provided for the men. Applications for enrolment have far exceeded the numbers that can be taken.

REVIEWS.

Official History of Australia in the War of 1914—18.

Volume IV. The A. I. F. in France 1917. BY C. E. W. BEAN.

(Angus & Robertson, Ltd., Sydney, 1933), 21s.

This volume deals with the part, an important part too, taken by the A. I. F. in the German withdrawal to the Hindenburg line, the British efforts to carry it in 1917, and the battles of MESSINES and THIRD YPRES.

How the I and II Anzac Corps had emerged from the chrysalis stage and became highly efficient and trained instruments of war is amply shown in this volume, and proved by German records, with which the book is amply provided in appropriate places.

The account of the German withdrawal to the Hindenburg line is of particular interest in showing how difficult it is, even with the most vigilant reconnaissance, to prevent the orderly withdrawal of a well-organised modern army. It is interesting to speculate what effect a modern armoured force would have on such a withdrawal, especially in view of the almost complete failure of the first "massed" attack with tanks which took place after touch with the Hindenburg line had been gained. The tactics used and initiative shown by all ranks of the A. F. I. in following up the withdrawal might well be studied by those who are striving to train their men to become efficient "light" infantry. The great value of initiative amongst junior officers, non-commissioned officers and men is specially noticeable, but this quality appears to be more an instinct of our dominion soldiers, than due to the effect of training. The bold spirit, so often decried as lack of discipline, which made so many Australian soldiers push on in search of adventure beyond their objectives, is the same which made them hang on with such remarkable tenacity to positions they had won. It is amply borne out by the vivid account of the costly attacks on the Hindenburg line at BULLECOURT.

The lesson to be learnt is that, far from such spirit being decried, it should be encouraged, but should be tempered with understanding discipline. The ideal soldier will emerge.

The well-earned rest after the BULLECOURT operations was amply justified by the amazing increase in efficiency, discipline and

morale of the men. The friendly rivalry between units and formations in the A. I. F. engendered by this rest, and the belated recognition by higher authorities that their fighting efficiency would be greatly enhanced if the two Anzac Corps were to enter battle side by side, were largely responsible for the tremendous enthusiasm with which they fought in the battles of MESSINES and THIRD YPRES.

The tactics of these two battles are well brought out. The value of the limited objective in this type of warfare, coupled with the necessity for effective support by artillery at every stage, stands out. The over-optimism of the higher command after the initial successes is held to be responsible for the comparative failure and costliness of the final attacks of each battle, which were undertaken with more hurried and less complete preparations. In spite of enormous casualties, the Anzac Corps felt that they were given a chance, and came out of each action in great spirits and with unimpaired morale. After the 1st PASSCHENDAELE battle, they were moved to a quiet front, and except for the normal trench warfare, were not employed again in 1917.

A very able summary of allied action in 1917 closes the volume. The author's comments on the strategy and tactics of the Flanders battles should do much to allow those, who remember only the casualty lists, to view them in their proper perspective.

The difficulties of the higher command and the policy and strategy of the Allies in 1917 are well set out at appropriate places in the book; the methods employed to achieve tactical success are well explained. In addition, the author deals in great detail with the actions of units and individuals in each battle. For these reasons, the book should be of interest to every student of war, but will be of particular interest to individual officers and men who fought with or near the A. I. F. in France. Prospective readers should not be daunted by the length of the book,—967 pages!

It would have been of advantage if one general map had been inserted at the end of the book, in order to allow the reader to fit the numerous small sketch-maps, which illustrate the descriptions of the various actions, into the general picture.

NOTE.—Vol. III was reviewed in the October 1929 number of the Journal.

D. D. G.

**"The 4th Battalion, 10th Baluch Regiment (D. C. O.)
in the Great War." BY W. S. THATCHER.**

(University Press, Cambridge, 1932.)

Regimental histories can be divided roughly into two classes; those read by the regiments concerned as a duty and those read by the Service as a pleasure. The former are too common, the latter too rare. Belonging to this latter category are, among a few others, the histories of the Guards battalions and, recently, an excellent record of the now disbanded Madras Pioneers.

The 129th Baluchis are therefore to be congratulated on their historian, Mr. Thatcher (Lieut. W. S. Thatcher, M.C., 129th Baluchis) who joined the battalion as a 2nd Lieutenant, A. I. R. O., at the beginning of the war and served with it to the end. He is now, we believe, a Don at Cambridge and looks back upon his war service as "the great adventure of his life." Consequently he brings to his task of historian all the enthusiasm for the battalion and men whom he fought with and loved, and all the understanding, personal touch and experience to clothe the dry bones of official records. All through this record of winter fighting in Flanders and bush warfare in East Africa there is a silver thread running of the affection that existed between officers and men, which is both an inspiration and example.

The work done by the Indian Divisions in Flanders in 1914-15 is apt to be decried by historians and others who have not the imagination to realise how magnificent were their achievements, in appalling conditions, against the flower of the German Army. From October 1914 until September 1915, the 129th Baluchis were in and out of the trenches in the Ypres sector, suffering casualties for which there were no replacements, being shelled and gassed without being able to reply in kind, and in an environment for which they were not clothed, equipped or trained. It is an honourable story which almost hurts to read. At Hollebeke, Sepoy Khudadad Khan won the first Victoria Cross awarded to an Indian soldier. In the muddle of the 2nd Battle of Ypres the regiment gave an excellent account of itself despite the German gas and confusion of orders so lightly glossed over in the *Official History*.

After refitting in Egypt the regiment reached East Africa in March 1916 and remained there fighting Von Lettow-Vorbeck's elusive columns until January 1918. The author served with the 129th during most of this period and gives an account of the work, fighting and general operations as interesting as it is instructive. For any student of this campaign or type of warfare the book is invaluable. Disease, hardship and poor rations exacted a greater toll than enemy bullets but the actions at Kibata, Mbindia Nameki and Mviti Water serve to show the continuance of the fighting spirit. A sad ceremony occurred on 3rd December 1917 when the 129th were inspected at Namakongwa by General Hannington who had gone with them as 2nd in Command to France. Only 250 men were on parade, of which a mere 11 were Flanders veterans.

It is an inspiring record of which any regiment should be proud and the 129th Baluchis will be the first to admit the help and strength they received in the form of drafts and reinforcements from its sister battalions, all of whom now form the 10th Baluch Regiment.

The volume is replete with admirable maps and appendices, not the least deserving of notice being a note on the "Composition of the Regiment" by Lieut.-Colonel H. V. Lewis, D.S.O., M.C. Those interested in the problem of martial and non-martial classes of trans-border soldiers and such like controversial subjects will herein find something to their taste. Finally the following extract of a report by the German Commander, Von Lettow-Vorbeck deserves notice: ".....the 129th Baluchis.....were without a doubt very good." We congratulate Mr. Thatcher on one of the most readable and documented regimental histories published since the war.—ED.

GRANT AND LEE. A Study in Personality and Generalship.

By MAJOR-GENERAL J. F. C. FULLER.

(Fyre and Spottiswoode, 10s. 6d. net.)

General Fuller tells us in his preface that his book "is not primarily a history of the American Civil War." "In place," he says, "it is an analysis of two personalities, in which the outline of the war as set forth is no more than the background....." This background,

however, stands out in some relief, so much so in fact that the book was originally recommended in Army Orders to those preparing to study the American Civil War, when that Campaign was still in the promotion examination syllabus.

After an introductory chapter in which a comparison is made between the Federals and Confederates, their Presidents, their Problems, their Armies, etc. : General Fuller proceeds to examine the personalities of Grant and Lee. This he does mainly by means of quoting what has been written about the two Generals in various books. It is a thorough analysis and full references are given, though it must be said that this mass of quotations becomes a trifle wearisome. Then an outline of the War comprising three chapters brings us to the final chapter, in which the qualities of Grant and Lee are compared. Those who have read General Fuller's book "*The Generalship of Ulysses S. Grant*" will not be surprised to learn that Grant comes well out of the comparison. Possibly the author treats Lee somewhat harshly though we know what to expect when we are told in the early pages of the book that, as a result of studying the American Civil War, General Fuller has discovered that Lee, whom he previously regarded as "one of the greatest Generals this world has ever seen," was "in several respects one of the most incapable Generals-in-Chief in history." But those who disagree either wholly or in part with the author's conclusions must admit that amongst Lee's characteristics were those, such as his weakness with his subordinates and his subservience towards the President, which one would hardly look for in a great general.

This "*Study in Personality and Generalship*" is a well arranged book with plenty of sketch-maps. It cannot fail to interest the student of military history, but the book will not be confined by any means, one believes, to that class of reader alone.

H. H. S.

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JANUARY 1933.

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I.—New Members.

The following new members joined the Institution from 1st September to 30th November 1932 :—

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D.S.O.

II.—The Journal.

The Institution publishes a Quarterly Journal in the months of January, April, July and October, which is issued postage free to members in any part of the world. Non-members may obtain the Journal at Rs. 2 annas 8 per number, or Rs. 10 per annum. Advertisement rates may be obtained on application to the Secretary.

III.—Contributions to the Journal.

Articles may vary in length from two thousand to ten thousand words. Payment is made on publication at from Rs. 40 to Rs. 100 in accordance with the value and length of the contribution.

With reference to Regulations for the Army in India, paragraph 204 and King's Regulations, paragraph 522, action to obtain the

sanction of His Excellency the Commander-in-Chief to the publication of any article in the Journal of the United Service Institution of India will be taken by the Executive Committee of the Institution.

The Committee reserve to themselves the right to omit any matter which they consider objectionable.

Articles are only accepted on these conditions.

IV.—Reading Room and Library.

The United Service Institution of India is situated in the Mall, Simla, and is open all the year round—including Sundays—from 9. A.M., until sunset. The Reading Room of the Institution is provided with the leading illustrated papers, newspapers, magazines and journals of military interest.

There is a well-stocked library in the Institution, from which members can obtain books on loan free, in accordance with the following rules :—

(1) The Library is only open to members and honorary members, who are requested to look upon books as not transferable to their friends.

(2) No book shall be taken from the Library without making the necessary entry in the register. Members residing permanently or temporarily in Simla are requested to enter their addresses.

(3) A member shall not be allowed at one time, more than three books or sets of books.

(4) No particular limit is set as to the number of days for which a member may keep a book, the Council being desirous of making the Library as useful as possible to members ; but if after the expiration of a fortnight from date of issue it is required by any other member it will be re-called.

(5) Applications for books from members at out-stations are dealt with as early as possible, and books are despatched post free per Registered Parcel Post. They must be returned carefully packed per Registered Parcel Post within one month of date of issue.

(6) If a book is not returned at the end of one month, it must be paid for without the option of return, if so required by the Executive Committee. Lost and defaced books shall be replaced at the cost of the member to whom they were issued. In the case of lost books which are out of print the value shall be fixed by the Executive Committee, and the amount, when received, spent in the purchase of a new book.

(7) The issue of a book under these rules to any member implies the latter's compliance with the rules, and the willingness to have them enforced, if necessary, against him.

(8) The catalogue of the Library is completed to 31st March 1924. Price Rs. 3-8-0 or postage paid Rs. 3-14-0. An addendum completed up to 30th September 1927 is available. Price annas 8 plus postage annas 4.

V.—New Books.

BOOKS RECEIVED.

<i>Title.</i>	<i>Published.</i>	<i>Author.</i>
Indian Police 1862-1931	.. 1932 ..	J. C. Curry.
Air Power and the Cities	.. 1930 ..	J. M. Spaight.
Fear and be Slain	.. 1931 ..	J. E. B. Seely.
India in 1930-31	.. 1932 ..	....
Last Days of the German Fleet	.. 1932 ..	Ludwig Freiwald.
Life of Lord Carson, Vol. I.	.. 1932 ..	E. Marjoribanks.
Their Secret Purpose	.. 1932 ..	Hector C. Bywater.
The British Way in Warfare	.. 1932 ..	B. H. Liddell-Hart.
A Study of the Strategy and Tactics of the East Prussian Campaign 1914, 2nd revised edition.	1932 ..	Lt.-Col. A. Kearsey.
A Guide to Court-Martial Procedure	.. .. .	Capt. L. J. L. Pullar.
The 4th Bn., The D. C. O. 10th Baluch Regiment in the Great War (129th Baluchis).	1932 ..	W. S. Thatcher.
The Tragedy of the Dardanelles	.. 1932 ..	Edmond Delage.
Here's Horse Sense	.. 1932 ..	R. S. Summerhays.

BOOKS ON ORDER.

The Life of Sir Mortimer Durand	.. ..	Sykes.
The Fifth Army	.. ..	Gough.
Talleyrand	.. ..	Duff Cooper.
War and Western Civilization	.. ..	J. F. G. Fuller.
Ogpu	.. ..	Agabekov.

VI.—Books recommended for Staff College and Promotion Examination Students.

The following list of books available in the Library may be found useful for reference by officers studying for Promotion Examinations or entrance to the Staff College. In addition to those enumerated below, there is a large number of books in the Library dealing with Military History, Tactics, Organization, Administration, Military Geography, Languages, etc. Should any member require a book not shown in this list, he should apply to the Librarian, when it will, if procurable, be forwarded to him.

MILITARY HISTORY.

(Before beginning to read Military History, candidates are advised to study carefully Section 9, Training and Manœuvre Regulations, 1923.)

1.—*The Great War, General History.*

Soldiers and Statesmen (Field-Marshal Sir W. Robertson).
The Great War of 1914—18 (Aston).
The World Crisis (Winston Churchill).
At G. H. Q. (Charteris).
The Real War (Liddell Hart).
The Empire at War (4 Vols.) (Lucas).
My War Memories (Ludendorff).
The First World War, 1914—1918 (Repington).
General Headquarters, 1914—16, and its Critical Decisions (Falkenhayn).

2.—*The Campaign of the British Army in France and Belgium.*

A.—OFFICIAL HISTORY OF THE WAR.

Military Operations, France and Belgium, Vols. I to V.

B.—OTHER BOOKS.

Forty Days in 1914 (Maurice, new edition).
Ypres, 1914. (An official account) (German General Staff).
Memoirs of Marshal Foch (1931).
Story of the Fourth Army (Montgomery).
The Fifth Army (Gough).
The Last Four Months (Maurice).

3.—*The Palestine Campaign.*

A.—OFFICIAL ACCOUNTS.

A Brief Record of the Advance of the Egyptian Expeditionary Force, 1919.
The Official History of the Great War. Military Operations in Egypt and Palestine, Vol I, and Maps (Lieut.-General Sir G. MacMunn).
The Official History, Operations, Egypt and Palestine, from June 17th to the end of the War, Parts I and II, with maps (Capt. Cyril Falls).

B.—OTHER BOOKS.

- The Palestine Campaign (Wavell).
 The Revolt in the Desert (T. E. Lawrence).
 With the Turks in Palestine (Aaronsohn).
 Outline of the Egyptian and Palestine Campaigns, 1914—18
 (Bowman—Manifold).
 How Jerusalem was Won (Massy).
 The Desert Mounted Corps (Preston).
 U. S. I. Journal—October 1923 (Captain Channer's article).

4.—*The Dardanelles Campaign.*

A.—OFFICIAL ACCOUNTS.

- Naval and Military Despatches . . . A clear account of the operations in detail from the G. H. Q. standpoint.
- Report of the Dardanelles Commission. Fixes responsibility for the inception and conduct of the campaign. An interesting study in the relationship between Politicians and Naval and Military Experts.
- Despatches from the Dardanelles (Ian Hamilton).
 Official History of the Great War, Gallipoli, May 1915, Vol. I, Vol. II (C. F. Aspinall Oglander).

B.—OTHER BOOKS.

- The Dardanelles (Callwell).
 Dardanelles Campaign (Nevinson).
 The Navy in the Dardanelles Campaign (Wester Wemyss).

5.—*The Mesopotamia Campaign.*

A.—OFFICIAL ACCOUNT.

- Official History of the Campaign in Mesopotamia, Vols. I to IV, (F. J. Moberly).

B.—OTHER BOOKS.

- Critical Study of the Campaign in Mesopotamia up to April 1917 (Staff College).
 The Campaign in Mesopotamia, 1914—18 (Evans).
 Notes on the Campaign in Mesopotamia (Kearsey).
 A Chapter of Misfortunes.
 My Campaign in Mesopotamia (Townshend).
 Mesopotamia, 1917—20. Loyalties (Sir A. Wilson).

6.—*Waterloo Campaign.*

- Wellington and Waterloo (Arthur Griffiths).
Waterloo, the Downfall of the first Napoleon (George Hooper).
Story of Waterloo (Hutchinson).
Campaign of 1815 (W. H. James).
With Napoleon at Waterloo (E. B. Low).
Napoleon and Waterloo (Becke).
Waterloo (Ropes).
Campaign of 1815, Ligny: Quatre-Bras: Waterloo (W. O'Connor Morris).
Waterloo Campaign (Maguire).
Waterloo Campaign (S. C. Pratt).
Wellington and Waterloo (G. W. Redway).
Wellington's Campaigns. Peninsula-Waterloo, 1808—15, also Moore's Campaign of Corunna (C. W. Robinson).
A Study of the Waterloo Campaign ("Tacticus").

7.—*Marlborough's Campaigns.*

- History of the British Army, Vol. I (Hon. J. W. Fortescue).
Life of John, Duke of Marlborough, Vols. I and II (Archibald Alison).
The Wars of Marlborough, 1702—09 (Frank Taylor).
John Churchill, Duke of Marlborough, Vols. I and II (Viscount Wolseley).
Marlborough and the Rise of the British Army (C. T. Atkinson).
A Short Life of Marlborough (H. J. & E. A. Edwards).
The Battle of Blenheim (Hilaire Belloc).
Marlborough and his Campaigns, 1702—09 (A. Kearsey).
Marlborough: The Portrait of a Conqueror (Chidsey).
Marlborough (Fortescue).
Six British Battles (Belloc).
England under Queen Anne (Trevelyan).

8.—*The American Civil War.*

- Stonewall Jackson and the American Civil War (G. F. R. Henderson).
History of the Civil War in the United States, 1861—65 (W. B. Wood and J. E. Edmonds).
History of the Campaign of Gen. T. J. (Stonewall) Jackson in the Shenandoah Valley of Virginia (William Allen).
A Study of the Strategy and Tactics of the Shenandoah Valley Campaign, 1861—62 (A. Kearsey).

The American Civil War, 1861—64 (John Formby).
 History of the American Civil War (J. W. Draper).
 Fredericksburg and Chancellorsville (J. E. Gough).
 Battles and Leaders of the Civil War (Johnson and Buell).
 Robert E. Lee, The Soldier (Maurice).
 Sherman (Liddell Hart).
 The Generalship of Ulysses S. Grant (Fuller).

9.—*The East Prussian Campaign.*

Tannenberg—First 30 days in East Prussia (Edmund Ironside).
 Out of My Life (Von Hindenburg).
 My War Memories (Ludendorff).
 Tannenberg (Kearsey).

10.—*The Russo-Japanese War, 1904, up to and including the Battle of Liao-Yang.*

Lectures on the Strategy of the Russo-Japanese War (Bird).
 Questions on the Russo-Japanese War (Brunker).
 Official Account: The Russo-Japanese War (Naval and Military).
 3 Vols., published by Committee of Imperial Defence.
 Outline of the Russo-Japanese War (Ross).
 A Study of the Russo-Japanese War (Chasseur).
 A Staff Officer's Scrap Book (Hamilton).
 Outline History of the Russo-Japanese War, 1904, up to the Battle of Liao-Yang, with Questions and Answers (P. W.).
 An Account of the Battle of Liao-Yang (with questions and 10 maps for examination purposes) (Bird).
 Short Account of the Russo-Japanese War ("Footslogger").

11.—*Napoleon's Italian Campaign, 1796-97.*

Napoleon's Campaign in Italy (Burton).
 Encyclopædia Britannica.

ORGANIZATION AND ADMINISTRATION.

12.—*Organization of the Army.*

A.—ORGANIZATION OF THE ARMY SINCE 1868.

History of the British Army, by Fortescue, Vols. I to XIII.
 Outline of the Development of the British Army, by Major-General Sir W. H. Anderson.
 Short History of the British Army to 1914 (Sheppard).
 The Empire and the Army (Fortescue).

B.—FORCES OF THE EMPIRE.

The Annual Army Estimates of Effective and Non-Effective Services (H. M. Stationery Office).

Notes on the Land Forces of the British Dominions, Colonies, Protectorates and Mandated Territories.

The Statesman's Year Book.

Army List.

C.—FOREIGN ARMIES.

League of Nations Handbook, Armaments

War Office Official Handbooks of Foreign Armies

13.—*Development and Constitution of the British Empire.*

A.—THE BRITISH EMPIRE.

The Strength of England (Bowles).

Splendid Adventure (Hughes).

Empire Government (Nathan).

New Imperial Ideals (Stokes).

How Britain is Governed (Ramsay).

Short History of the British Commonwealth (Ramsay).

The Government of the British Empire (Jenks, 1923).

The Foundation and Growth of the British Empire (J. A. Williamson, 1918).

The Beginnings of English Overseas Enterprise (C. P. Lucas, 1917).

Cambridge History of the British Empire (Vols. 1—6).

Short History of British Expansion (Williamson).

Rise of the British Empire (Moncrieff).

The Government of England (L. A. Lowell, 1912).

The Expansion of the British Empire (W. H. Woodward, 1927 edition).

The Origin and Growth of the British Colonies and of Their System of Government (H. E. Egerton, 1903).

The English Constitution (Bagehot, 1909).

England in the Seven Years' War (Sir J. Corbett, 1907).

B.—BOOKS ON SPECIAL PORTIONS OF THE EMPIRE OR WORLD.

The Rise and Expansion of British Dominion in India (Sir A. O. Lyall, 1894).

General Survey of the History of India (Sir Verney Lovett).

India in 1929-30.

India in 1930-31.

Modern Egypt (Cromer, 1908).

Egypt and the Army (Elgood, 1924).
 The History of Canada (W. L. Grant).
 Report on British North America (Sir C. P. Lucas).
 The Union of South Africa (R. H. Brand, 1909).
 History of the Australasian Colonies (Jenks, 1912).
 The Lost Possessions of England (W. F. Lord, 1896).
 International Relations of the Chinese Empire (H. B. Mosse)
 (Kelly and Walsh, Shanghai).
 What's Wrong with China ? (Gilbert).
 Why China Sees Red (Putnam-Weale).

MILITARY GEOGRAPHY.

14.—*Military Geography.*

Naval and Military Geography of the British Empire (Dr. Vaughan Cornish, 1916).
 Imperial Military Geography (Capt. D. H. Cole).
 Imperial Communications (Wakeley).
 Imperial Economy (Major R. J. Wilkinson).
 Changing Conditions of Imperial Defence (Cole).
 Imperial Military Geography (Lee).
 Military Geography of the British Commonwealth (Salt).

TACTICS.

15.—*Tactical Problems.*

Common mistakes in the solution of tactical problems and how to avoid them (Lieut.-Colonel A. B. Beauman, 1926).

Historical illustrations to Field Service Regulations, Vol. II (Major E. G. Eady).

Tactical Schemes with Solutions, 1st and 2nd Series (Kirby and Kennedy).

Elementary Tactics or the Art of War, British School (Major R. P. Pakenham-Walsh).

Lectures on F. S. R. III, 1931 (Fuller).

VII.—Schemes.

Efforts are being made to compete with demands for tactical schemes from officers working for the Staff College Examination by introducing as many new schemes as possible. In addition to reprints of several schemes, the Institution is now in possession of the complete set of schemes with solutions set at the 1932 Army Headquarters Staff College Course.

In order to simplify their issue, the schemes have been classified as follows. When ordering members are requested to give the subject of the schemes required.

STAFF COLLEGE SERIES, 1932.

Continuous Exercise No. 1 "Message Writing,"	
with solution	Re. 1/-
Continuous Exercise No. 2 "Order Writing,"	
with solution	" 1/-
Continuous Exercise No. 3 "Advance Guards,"	
with solution	" 1/-
Continuous Exercise No. 4 "Appreciation,"	
with solution	" 1/-
Continuous Exercise No. 5 "Attack Orders,"	
with solution	" 1/-
Continuous Exercise No. 6 "Defence," with	
solution	" 1/-
Continuous Exercise No. 7 "Defence," with	
solution	" 1/-

(NOTE.—A copy of the map, which is the same for all the above Exercises, can be had on payment of Rs. 2/- extra).

Strategy and Tactics No. 1, with map and solutions Rs. 3/8

Strategy and Tactics No. 2, with map and solutions " 3/8 (Rs. 1/8 without map which is the same as for S. & T. paper No. 1).

Strategy and Tactics No. 3, with map and solutions " 3/8

Cavalry Exercise, with map and solutions " 3/8

Tactical Exercise—Night withdrawals, with map and solutions " 3/8

Mountain Warfare, without map and solutions .. 1/-

VIII.—Precis of Lectures, etc.

Military History.

The East Prussian Campaign, 1914 (1931) ..	Rs. 1/8
The Third Afghan War (1931)	" 1/8
The Palestine Campaign, I (1930)	" 1/8
The Palestine Campaign, II (1930)	" 1/8
American Civil War (1930)	" 1/-
The History and Organization of the Empire (1932)	" -/12

Tactical.

Military Evolution and the Influence of Modern Inventions on Warfare (1932)	..	Rs.	-/12
Tactical Lessons of the Great War (1932)	..	..	1/8
Cavalry, I (1932)	..	..	-/8
Cavalry, II (1932)	..	..	-/8
The Employment of Divisional Cavalry (1930)	..	..	-/8
Artillery, I (1932)	..	..	-/4
Artillery, II (1932)	..	..	-/4
Engineers, I & II (1932)	..	..	-/12
Tactical Employment of Tanks (1932)	..	..	-/12
Armoured Cars (1930)	..	..	-/8
Chemical Warfare (1932)	..	..	-/8
Night Operations (1932)	..	..	2/-
Frontier Warfare (1932)	..	..	1/8
Air Co-operation (1932)	..	..	-/12

Military Law.

Military Law, I (1932)	-/4
Military Law, II (1932)	..	..	-/4
Military Law, III (1932)	..	..	-/4
Military Law, IV (1932)	..	..	-/4
Specimen Military Law Paper (1932)	..	..	1/-

Organization, Administration and Transportation.

Mobilization (1932)	..	..	-/4
Reinforcements in War (1932)	..	..	-/4
Organization, Administration and Transportation (Peace)—Specimen Examination Paper with notes (1932)	..	..	1/8
Organization, Administration and Transportation (War)—Specimen Examination Paper (1932)	..	..	1/-
"Q" Services in Peace (1932)	..	..	1/8
Movements (1932)	..	..	1/8
Movements—Specimen Examination Paper (1932)	..	..	1/-
Supply of a Division in War (1932)	..	..	1/8
Supply Problem—Specimen Examination Paper (1932)	..	..	1/-

General.

Notes on Military Writing (1932)	..	..	-/4
Essay—Specimen Paper (1932)	..	..	1/-
Hints on Working for Examinations (1930)	..	..	-/8

IX.—Historical Research.

The U. S. I. is prepared to supply members and units with type-written copies of old Indian Army List pages, at the rate of Rs. 2 per type-written page.

The staff of the Institution is always available to assist units, authors of regimental histories and members by searching the many old military records in the Library on their behalf.

X.—The MacGregor Memorial Medal.

1. The MacGregor Memorial Medal was founded in 1888 as a memorial to the late Major-General Sir Charles MacGregor. The medals are awarded for the best military reconnaissances or journeys of exploration of the year.

2. The following awards are made annually in the month of June:—

(a) For officers—British or Indian—silver medal.

(b) For soldiers—British or Indian—silver medal with Rs. 100 gratuity.

3. For especially valuable work a gold medal may be awarded in place of one of the silver medals, or in addition to the silver medals, whenever the administrators of the fund deem it desirable. Also the Council may award a special additional silver medal, without gratuity, to a soldier, for especially good work.

4. The award of medals is made by His Excellency the Commander-in-Chief, as Vice-Patron, and the Council of the United Service Institution, who were appointed administrators of the Fund by the MacGregor Memorial Committee.

5. Only officers and soldiers belonging to the Army in India (including those in civil employ) are eligible for the award of the medal.*

6. The medal may be worn in uniform by Indian soldiers on ceremonial parades, suspended round the neck by the ribbon issued with the medal.†

7. Personal risk to life during the reconnaissance or exploration is not a necessary qualification for the award of the medal; but in the event of two journeys being of equal value, the man who has run the greater risk, will be considered to have the greater claim to the reward.

*N.B.—The terms "officer" and "soldier" include those serving in the British and Indian armies and their reserves, also those serving in Auxiliary Forces, such as the Indian Auxiliary and Territorial Forces and Corps under Local Governments, Frontier Militia, Levies and Military Police, also all ranks serving in the Indian States Forces.

† Replacements of the ribbon may be obtained on payment from the Secretary, U. S. I., Simla.

MacGregor Memorial Medal—concl'd.

8. When the work of the year has either not been of sufficient value, or has been received too late for consideration before the Council Meeting, the medal may be awarded for any reconnaissance during previous years considered by His Excellency the Commander-in-Chief to deserve it.

MACGREGOR MEMORIAL MEDALLISTS.

(With rank of officers and soldiers at the date of the Award).

- 1889 .. BELL, Col. M. S., v.c., R.E. (specially awarded a gold medal).
- 1890 .. YOUNGHUSBAND, Capt. F. E., King's Dragoon Guards.
- 1891 .. SAWYER, Maj. H. A., 45th Sikhs.
RAMZAN KHAN, Havildar, 3rd Sikhs.
- 1892 .. VAUGHAN, Capt. H. B., 7th Bengal Infantry.
JAGGAT SINGH, Havildar, 19th Punjab Infantry.
- 1893 .. BOWER, Capt. H., 17th Bengal Cavalry (specially awarded a gold medal).
FAZAL DAD KHAN, Dafadar, 17th Bengal Cavalry.
- 1894 .. O'SULLIVAN, Maj. G. H. W., R.E.
MULL SINGH, Sowar, 6th Bengal Cavalry.
- 1895 .. DAVIES, Capt. H. R., Oxfordshire Light Infantry.
GANGA DYAL SINGH, Havildar, 2nd Rajputs.
- 1896 .. COCKERILL, Lieut. G. K., 28th Punjab Infantry.
GHULAM NABI, Sepoy, Q. O. Corps of Guides.
- 1897 .. SWAYNE, Capt. E. J. F., 10th Rajput Infantry.
SHAHZAD MIR, Dafadar, 11th Bengal Lancers.
- 1898 .. WALKER, Capt. H. B., Duke of Cornwall's Light Infantry.
ADAM KHAN, Havildar, Q. O. Corps of Guides.
- 1899 .. DOUGLAS, Capt. J. A., 2nd Bengal Lancers.
MIHR DIN, Naik, Bengal Sappers and Miners.
- 1900 .. WINGATE, Capt. A. W. S., 14th Bengal Lancers.
GURDIT SINGH, Havildar, 45th Sikhs.
- 1901 .. BURTON, Maj. E. B., 17th Bengal Lancers.
SUNDAR SINGH, Colour Havildar, 31st Burmah Infantry.
- 1902 .. RAY, Capt. M. R. E., 7th Rajput Infantry.
TILBIR BHANDARI, Havildar, 9th Gurkha Rifles.
- 1903 .. MANIFOLD, Lieut.-Col. C. C., I.M.S.
GHULAM HUSSAIN, Lance-Dafadar, Q. O. Corps of Guides.
- 1904 .. FRASER, Capt. L. D., R.G.A.
MOGHAL BAZ, Dafadar, Q. O. Corps of Guides.
- 1905 .. RENNICK, Maj. F., 40th Pathans (specially awarded a gold medal).
MADHO RAM, Havildar, 8th Gurkha Rifles.
- 1906 .. SHAHZADA AHMAD MIR, Risaldar, 36th Jacob's Horse.
GHAFUR SHAH, Lance-Naik, Q. O. Corps of Guides Infantry.

MACGREGOR MEMORIAL MEDALLISTS—(contd.).

- 1907 .. NANGLE, Capt. M. C., 92nd Punjabis.
SHEIKH USMAN, Havildar, 103rd Mahratta Light Infantry.
- 1908 .. GIBBON, Capt. C. M., Royal Irish Fusiliers.
MALANG, Havildar, 56th Punjab Rifles.
- 1909 .. MUHAMMAD RAZA, Havildar, 106th Pioneers.
- 1910 .. SYKES, Maj. P. M., C.M.G., late 2nd Dragoon Guards (specially awarded a gold medal).
TURNER, Capt. F. G., R.E.
KHAN BAHADUR SHEER JUNG, Survey of India.
- 1911 .. LEACHMAN, Capt. G. E., The Royal Sussex Regiment.
GURMUKH SINGH, Jemadar, 93rd Burmah Infantry.
- 1912 .. PRITCHARD, Capt. B. E. A., 83rd Wallajahabad Light Infantry (specially awarded a gold medal).
WILSON, Lieut. A. T., C.M.G., 32nd Sikh Pioneers.
MOHIBULLA, Lance-Dafadar, Q. V. O. Corps of Guides.
- 1913 .. ABBAY, Capt. B. N., 27th Light Cavalry.
SIRDAR KHAN, Sowar, 39th (K. G. O.) Central India Horse.
WARATONG, Havildar, Burmah Military Police (specially awarded a silver medal).
- 1914 .. BAILEY, Capt. F. M., I.A. (Political Department).
MORSHEAD, Capt. H. T., R.E.
HAIDAR ALI, Naik, 106th Hazara Pioneers.
- 1915 .. WATERFIELD, Capt. F. C., 45th Rattray's Sikhs.
ALI JUMA, Havildar, 106th Hazara Pioneers.
- 1916 .. ABDUR RAHMAN, Naik, 21st Punjabis.
ZARGHUN SHAH, Havildar, 58th Rifles (F.F.), (specially awarded a silver medal).
- 1917 .. MIAN AFRAZ GUL, Sepoy, Khyber Rifles.
- 1918 .. NOEL, Capt. E. W. C. (Political Department).
- 1919 .. KEELING, Lieut.-Colonel E. H., M.C., R.E.
ALLA SA, Jemadar, N. W. Frontier Corps.
- 1920 .. BLACKER, Capt. L. V. S., Q. V. O. Corps of Guides.
AWAL NUR, C. Q. M. Havildar, 2nd Bn., Q. V. O. Corps of Guides. (Special gratuity of Rs. 200.)
- 1921 .. HOLT, Maj. A. L., Royal Engineers.
SHER ALI, Sepoy No. 4952, 106th Hazara Pioneers.
- 1922 .. ABDUL SAMAD SHAH, Capt., O.B.E., 31st D.C.O. Lancers.
NUR MUHAMMAD, Lance-Naik, 1st Guides Infantry, F. F.
- 1923 .. BRUCE, Capt. J. G., 2/6th Gurkha Rifles.
SOHBAT, Head Constable, N.-W. F. Police.
HARI SINGH THAPA, Survey Department (specially awarded a silver medal).
- 1924 .. RAHMAT SHAH, Havildar, I.D.S.M., N.-W. F. Corps.
GHULAM HUSSAIN, Naik, N.-W. F. Corps.

MACGREGOR MEMORIAL MEDALLISTS—(concl'd.).

- 1925 .. SPEAR, Capt. C. R., 5/13th Frontier Force Rifles.
JABBAR KHAN, Naik, 5/13th Frontier Force Rifles.
- 1926 .. HARVEY-KELLY, Maj. C. H. G. H., D.S.O., 4/10th Baluch Regiment.
- 1927 .. LAKE, Maj. M. C., 4/4th Bombay Grenadiers.
- 1928 .. BOWERMAN, Capt. J. F., 4/10th D. C. O. Baluch Regiment.
MUHAMMAD KHAN, Havildar, Zhob Levy Corps.
- 1929 .. ABDUL HANAN, Naik, N.-W. F. Corps (with gratuity of Rs. 100).
GHULAM ALI, Dafadar, Guides Cavalry (specially awarded a silver medal).
- 1930 .. GREEN, Capt. J. H., 3/20th Burmah Rifles.
- 1931 .. O'CONNOR, Capt. R. L., 1/9th Jat Regiment.
KHIAL BADSHAH, Naik, 1/13th Frontier Force Rifles.
- 1932 .. BIRNIE, Capt. E. St. J., Sam Browne's Cavalry.
SHIB SINGH NEGI, No. 4013, Rifleman, 10/18th Royal Garhwal Rifles.

UNITED SERVICE INSTITUTION OF INDIA.

PRIZE ESSAY GOLD MEDALLISTS.

(With Rank of Officers at the date of the Essay.)

- 1872 .. ROBERTS, Lieut.-Col. F. S., V.C., C.B., R.A.
- 1873 .. COLQUHOUN, Capt. J. S., R.A.
- 1874 .. COLQUHOUN, Capt. J. S., R.A.
- 1879 .. ST. JOHN, Maj. O. B. C., R.E.
- 1880 .. BARROW, Lieut. E. G., 7th Bengal Infantry.
- 1882 .. MASON, Lieut. A. H., R.E.
- 1883 .. COLLEN, Maj. E. H. H., S.C.
- 1884 .. BARROW, Capt. E. G., 7th Bengal Infantry.
- 1887 .. YATE, Lieut. A. C., 27th Baluch Infantry.
- 1888 .. MAUDE, Capt. F. N., R.E.
YOUNG, Maj. G. F., 24th Punjab Infantry (specially awarded a silver medal).
- 1889 .. DUFF, Capt. B., 9th Bengal Infantry.
- 1890 .. MAGUIRE, Capt. C. M., 2nd Cavy., Hyderabad Contingent.
- 1891 .. CARDEW, Lieut. F. G., 10th Bengal Lancers.
- 1893 .. BULLOCK, Maj. G. M., Devonshire Regiment.
- 1894 .. CARTER, Capt. F. C., Northumberland Fusiliers.
- 1895 .. NEVILLE, Lieut.-Col. J. P. C., 14th Bengal Lancers.
- 1896 .. BINGLEY, Capt. A. H., 7th Bengal Infantry.
- 1897 .. NAPIER, Capt. G. S. F., Oxfordshire Light Infantry.

PRIZE ESSAY GOLD MEDALLISTS—(concl.).

- 1898 .. MULLALY, Maj. H., R.E.
CLAY, Capt. C. H., 43rd Gurkha Rifles (specially awarded a silver medal).
- 1899 .. NEVILLE, Col. J. P. C., s.c.
- 1900 .. THUILLIER, Capt. H. F., R.E.
LUBBOCK, Capt. G., R.E. (specially awarded a silver medal).
- 1901 .. RANKEN, Lieut.-Col. G. P. P., 46th Punjab Infantry.
- 1902 .. TURNER, Capt. H. H. F., 2nd Bengal Lancers.
- 1903 .. HAMILTON, Maj. W. G., D.S.O., Norfolk Regiment.
BOND, Capt. R. F. G., R.E. (specially awarded a silver medal).
- 1904 .. MACMUNN, Maj. G. F., D.S.O., R.F.A.
- 1905 .. COCKERILL, Maj. G. K., Royal Warwickshire Regiment.
- 1907 .. WOOD, Maj. E. J. M., 99th Deccan Infantry.
- 1908 .. JEUDWINE, Maj. H. S., R.A.
- 1909 .. MOLYNEUX, Maj. E. M. J., D.S.O., 12th Cavalry.
ELSMIE, Maj. A. M. S., 56th Rifles, F. F. (specially awarded a silver medal).
- 1911 .. Mr. D. PETRIE, M.A., Punjab Police.
- 1912 .. CARTER, Maj. B. C., The King's Regiment.
- 1913 .. THOMSON, Maj. A. G., 58th Vaughan's Rifles (F. F.).
- 1914 .. BAINBRIDGE, Lieut.-Col. W. F., D.S.O., 51st Sikhs (F. F.).
NORMAN, Maj. C. L., M.V.O., Q. V. O. Corps of Guides
(specially awarded a silver medal).
- 1916 .. CRUM, Maj. W. E., v.D., Calcutta Light Horse.
- 1917 .. BLAKER, Maj. W. F., R.F.A.
- 1918 .. GOMPERTZ, Capt. A. V., M.C., R.E.
- 1919 .. GOMPERTZ, Capt. M. L. A., 108th Infantry.
- 1920 .. KEEN, Lt.-Col. F. S., D.S.O., 2/15th Sikhs.
- 1922 .. MARTIN, Maj. H. G., D.S.O., O.B.E., R.F.A.
- 1923 .. KEEN, Col. F. S., D.S.O., I.A.
- 1926 .. DENNYS, Maj. L. E., M.C., 4/12th Frontier Force Regiment.
- 1927 .. HOGG, Maj. D. McA., M.C., R.E.
- 1928 .. FRANKS, Maj. K. F., D.S.O., 5th Royal Mahrattas.
- 1929 .. DENNYS, Maj. L. E., M.C., 4/12th Frontier Force Regiment.
- 1930 .. DURNFORD, Maj. C. M. P., 4/6th Rajputana Rifles.
- 1931 .. FORD, Lt.-Col. G. N., 2/5th Mahratta Light Infantry.
- 1932 .. THURBURN, Lt. R. G., The Cameronians (Scottish Rifles).

ANCHOR LINE

PASSENGER SERVICE

BOMBAY to MARSEILLES and LIVERPOOL

†Britannia	-	-	-	Feb. 9
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I.—New Members.

The following new members joined the Institution from 1st December 1932 to 28th February 1933:—

ORDINARY MEMBERS.

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II.—The Journal.

The Institution publishes a Quarterly Journal in the months of January, April, July and October, which is issued postage free to members in any part of the world. Non-members may obtain the Journal at Rs. 2 annas 8 per number, or Rs. 10 per annum. Advertisement rates may be obtained on application to the Secretary.

III.—Contributions to the Journal.

Articles may vary in length from two thousand to ten thousand words. Payment is made on publication at from Rs. 40 to Rs. 100 in accordance with the value and length of the contribution.

With reference to Regulations for the Army in India, paragraph 204 and King's Regulations, paragraph 522, action to obtain the sanction of His Excellency the Commander-in-Chief to the publication of any article in the Journal of the United Service Institution of India will be taken by the Executive Committee of the Institution.

The Committee reserve to themselves the right to omit any matter which they consider objectionable.

Articles are only accepted on these conditions.

IV.—Reading Room and Library.

The United Service Institution of India is situated in the Mall, Simla, and is open all the year round—including Sundays—from

). A.M., until sunset. The Reading Room of the Institution is provided with the leading illustrated papers, newspapers, magazines and journals of military interest.

There is a well-stocked library in the Institution, from which members can obtain books on loan free, in accordance with the following rules:—

(1) The Library is only open to members and honorary members, who are requested to look upon books as not transferable to their friends.

(2) No book shall be taken from the Library without making the necessary entry in the register. Members residing permanently or temporarily in Simla are requested to enter their addresses.

(3) A member shall not be allowed at one time, more than three books or sets of books.

(4) No particular limit is set as to the number of days for which a member may keep a book, the Council being desirous of making the Library as useful as possible to members; but if after the expiration of a fortnight from date of issue it is required by any other member it will be re-called.

(5) Applications for books from members at out-stations are dealt with as early as possible, and books are despatched post free per Registered Parcel Post. They must be returned carefully packed per Registered Parcel Post within one month of date of issue.

(6) If a book is not returned at the end of one month, it must be paid for without the option of return, if so required by the Executive Committee. Lost and defaced books shall be replaced at the cost of the member to whom they were issued. In the case of lost books which are out of print the value shall be fixed by the Executive Committee, and the amount, when received, spent in the purchase of a new book.

(7) The issue of a book under these rules to any member implies the latter's compliance with the rules, and the willingness to have them enforced, if necessary, against him.

(8) The catalogue of the Library is completed to 31st March 1924. Price Rs. 3-8-0 or postage paid Rs. 3-14-0. An addendum completed up to 30th September 1927 is available. Price annas 8 plus postage annas 4.

V.—New Books.

BOOKS RECEIVED.

<i>Title.</i>	<i>Published.</i>	<i>Author.</i>
The Concise Story of the Dover Patrol.	.. 1929 ..	Admiral Sir R. Bacon.
The Fifth Army	.. 1931 ..	Sir Hubert Gough.
The Annual Report of the Smithsonian Institute.	.. 1931 ..	The Editor.

<i>Title.</i>	<i>Published.</i>	<i>Author.</i>
The Quatrains of Hali—A Verse Translation.	.. 1932 ..	C. S. Tute.
Vignettes from Indian Wars	.. 1932 ..	Sir George MacMunn.
A Short History of the 17th and 22nd Field Companies—3rd Sappers and Miners in Mesopotamia 1914—18.	.. ..	..
The Romance of Regimental Marches	1932 ..	Walter Wood.
War and Western Civilization 1832—1932.	..	Maj.-Genl. J. F. G. Fuller.
Thoughts and Adventures	.. 1932 ..	Rt. Hon. Winston S. Churchill.
Talleyrand	.. 1932 ..	Duff Cooper.
Military History for the Staff College Entrance Examination.	1932 ..	Capt. E. W. Sheppard.
Ogpu—The Russian Secret Service	.. 1932 ..	George Agabekov.
Problems of the North West Frontier 1890—1908—With a Survey of Policy since 1849.	1932 ..	C. Collin Davies.
Napoleon	.. 1932 ..	Hillaire Belloc.
Life of Lord Oxford and Asquith, 2 Vols.	1932 ..	J. A. Spender and Cyril Asquith.
What is the Territorial Army?	.. 1933 ..	Col. G. R. Codrington.
The Alien Menace (3rd revised edition).	.. 1932 ..	Lt.-Col. A. H. Lane.
Eyewitness	.. 1932 ..	Sir Ernest D. Swinton
Memoirs of Prince Von Bulow, 1849-1919, 4 vols.	.. 1930-32 ..	Translated by Voigt & G. Dunlop.
Imperial Military Geography, 7th edition.	.. 1933 ..	Maj. D. H. Cole.
Fatehgrah and the Indian Mutiny	.. 1933 ..	Lt.-Col. R. F. Cosens.
Modern Military Administration, Organization and Transportation.	1933 ..	Maj.-Genl. J. C. Harding

BOOKS ON ORDER.

What Would be the Character of a New War.	..	By the Inter-Parliamentary Union.
The History of the Russian Revolution, Vols. II & III	..	Leon Trotsky.
The Martial Races of India	..	Sir George MacMunn.
Political Handbook of the World, 1933.	..	Edited by Walter H. Mallory.
Twenty-Five Years in Tibet	..	Macdonald.

VI.—Books recommended for Staff College and Promotion Examination Students.

The following list of books available in the Library may be found useful for reference by officers studying for Promotion Examinations or entrance to the Staff College. In addition to those enumerated below, there is a large number of books in the Library dealing with

Military History, Tactics, Organization, Administration, Military Geography, Languages, etc. Should any member require a book not shown in this list, he should apply to the Librarian, when it will, if procurable, be forwarded to him.

MILITARY HISTORY.

(Before beginning to read Military History, candidates are advised to study carefully Section 9, Training and Manœuvre Regulations, 1923.)

1.—*The Great War, General History.*

Soldiers and Statesmen (Field-Marshal Sir W. Robertson).

The Great War of 1914—18 (Aston).

The World Crisis (Winston Churchill).

At G. H. Q. (Charteris).

The Real War (Liddell Hart).

The Empire at War (4 Vols.) (Lucas).

My War Memories (Ludendorff).

The First World War, 1914—1918 (Repington).

General Headquarters, 1914—1916, and its Critical Decisions (Falkenhayn).

2.—*The Campaign of the British Army in France and Belgium.*

A.—OFFICIAL HISTORY OF THE WAR.

Military Operations, France and Belgium, Vols. I to V.

B.—OTHER BOOKS.

Forty Days in 1914 (Maurice, new edition).

Ypres, 1914. (An official account) (German General Staff).

Memoirs of Marshal Foch (1931).

Story of the Fourth Army (Montgomery).

The Fifth Army (Gough).

The Last Four Months (Maurice).

3.—*The Palestine Campaign.*

A.—OFFICIAL ACCOUNTS.

A Brief Record of the Advance of the Egyptian Expeditionary Force, 1919.

The Official History of the Great War. Military Operations in Egypt and Palestine, Vol I, and Maps (Lieut.-General Sir G. MacMunn).

The Official History, Operations, Egypt and Palestine, from June 17th to the end of the War, Parts I and II, with maps (Capt. Cyril Falls).

B.—OTHER BOOKS.

- The Palestine Campaign (Wavell).
- The Revolt in the Desert (T. E. Lawrence).
- With the Turks in Palestine (Aaronsohn).
- Outline of the Egyptian and Palestine Campaigns, 1914—18 (Bowman—Manifold).
- How Jerusalem was Won (Massy).
- The Desert Mounted Corps (Preston).
- U. S. I. Journal—October 1923 (Captain Channer's article).

4.—*The Dardanelles Campaign.*

A.—OFFICIAL ACCOUNTS.

- Naval and Military Despatches .. A clear account of the operations in detail from the G. H. Q. standpoint.
- Report of the Dardanelles Com- Fixes responsibility for the mission. inception and conduct of the campaign. An interesting study in the relationship between Politicians and Naval and Military Experts.
- Despatches from the Dardanelles (Ian Hamilton).
- Official History of the Great War, Gallipoli, May 1915, Vols. I and II (C. F. Aspinall Oglander).

B.—OTHER BOOKS.

- The Dardanelles (Callwell).
- Dardanelles Campaign (Nevinson).
- The Navy in the Dardanelles Campaign (Wester Wemyss).

5.—*The Mesopotamia Campaign.*

A.—OFFICIAL ACCOUNT.

- Official History of the Campaign in Mesopotamia, Vols. I to IV, (F. J. Moberly).

B.—OTHER BOOKS.

- Critical Study of the Campaign in Mesopotamia up to April 1917 (Staff College).
- The Campaign in Mesopotamia, 1914—18 (Evans).
- Notes on the Campaign in Mesopotamia (Kearsey).
- A Chapter of Misfortunes.
- My Campaign in Mesopotamia (Townshend).
- Mesopotamia, 1917—20. Loyalties (Sir A. Wilson).

6.—*Waterloo Campaign.*

- Wellington and Waterloo (Arthur Griffiths).
Waterloo, the Downfall of the first Napoleon (George Hooper).
Story of Waterloo (Hutchinson).
Campaign of 1815 (W. H. James).
With Napoleon at Waterloo (E. B. Low).
Napoleon and Waterloo (Becke).
Waterloo (Ropes).
Campaign of 1815, Ligny: Quatre-Bras: Waterloo (W. O'Connor Morris).
Waterloo Campaign (Maguire).
Waterloo Campaign (S. C. Pratt).
Wellington and Waterloo (G. W. Redway).
Wellington's Campaigns. Peninsula-Waterloo, 1808—15, also Moore's Campaign of Corunna (C. W. Robinson).
A Study of the Waterloo Campaign ("Tacticus").

7.—*Marlborough's Campaigns.*

- History of the British Army, Vol. I (Hon. J. W. Fortescue).
Life of John, Duke of Marlborough, Vols. I and II (Archibald Alison).
The Wars of Marlborough, 1702—09 (Frank Taylor).
John Churchill, Duke of Marlborough, Vols. I and II (Viscount Wolseley).
Marlborough and the Rise of the British Army (C. T. Atkinson).
A Short Life of Marlborough (H. J. & E. A. Edwards).
The Battle of Blenheim (Hilaire Belloc).
Marlborough and his Campaigns, 1702—09 (A. Kearsey).
Marlborough: The Portrait of a Conqueror (Chidsey).
Marlborough (Fortescue).
Six British Battles (Belloc).
England under Queen Anne (Trevelyan).

8.—*The American Civil War.*

- Stonewall Jackson and the American Civil War (G. F. R. Henderson).
History of the Civil War in the United States, 1861—65 (W. B. Wood and J. E. Edmonds).
History of the Campaign of Gen. T. J. (Stonewall) Jackson in the Shenandoah Valley of Virginia (William Allen).
A Study of the Strategy and Tactics of the Shenandoah Valley Campaign, 1861—62 (A. Kearsey).

The American Civil War, 1861—64 (John Formby).
 History of the American Civil War (J. W. Draper).
 Fredericksburg and Chancellorsville (J. E. Gough).
 Battles and Leaders of the Civil War (Johnson and Buell).
 Robert E. Lee, The Soldier (Maurice).
 Sherman (Liddell Hart).
 The Generalship of Ulysses, S. Grant (Fuller).

9.—*The East Prussian Campaign.*

Tannenberg—First 30 days in East Prussia (Edmund Ironside).
 Out of My Life (Von Hindenburg).
 My War Memories (Ludendorff).
 Tannenberg (Kearsey).

10.—*The Russo-Japanese War, 1904, up to and including the Battle of Liao-Yang.*

Lectures on the Strategy of the Russo-Japanese War (Bird).
 Questions on the Russo-Japanese War (Brunker).
 Official Account: The Russo-Japanese War (Naval and Military),
 3 Vols., published by Committee of Imperial Defence.
 Outline of the Russo-Japanese War (Ross).
 A Study of the Russo-Japanese War (Chasseur).
 A Staff Officer's Scrap Book (Hamilton).
 Outline History of the Russo-Japanese War, 1904, up to the
 Battle of Liao-Yang, with Questions and Answers (P. W.).
 An Account of the Battle of Liao-Yang (with questions and 10
 maps for examination purposes) (Bird).
 Short Account of the Russo-Japanese War ("Footslogger").

11.—*Napoleon's Italian Campaign, 1796-97.*

Napoleon's Campaign in Italy (Burton).
 Encyclopædia Britannica.

ORGANIZATION AND ADMINISTRATION.

12.—*Organization of the Army.*

A.—ORGANIZATION OF THE ARMY SINCE 1868.

History of the British Army, by Fortescue, Vols. I to XIII.
 Outline of the Development of the British Army, by Major-
 General Sir W. H. Anderson.
 Short History of the British Army to 1914 (Sheppard).
 The Empire and the Army (Fortescue).

B.—FORCES OF THE EMPIRE.

The Annual Army Estimates of Effective and Non-Effective Services (H. M. Stationery Office).

Notes on the Land Forces of the British Dominions, Colonies, Protectorates and Mandated Territories.

The Statesman's Year Book.

Army List.

C.—FOREIGN ARMIES.

League of Nations Handbook, Armaments.

War Office Official Handbooks of Foreign Armies.

13.—*Development and Constitution of the British Empire*

A.—THE BRITISH EMPIRE.

The Strength of England (Bowles).

Splendid Adventure (Hughes).

Empire Government (Nathan).

New Imperial Ideals (Stokes).

How Britain is Governed (Ramsay).

Short History of the British Commonwealth (Ramsay).

The Government of the British Empire (Jenks, 1923).

The Foundation and Growth of the British Empire (J. A. Williamson, 1918).

The Beginnings of English Overseas Enterprise (C. P. Lucas, 1917).

Cambridge History of the British Empire (Vols. 1—6).

Short History of British Expansion (Williamson).

Rise of the British Empire (Moncrieff).

The Government of England (L. A. Lowell, 1912).

The Expansion of the British Empire (W. H. Woodward, 1927 edition).

The Origin and Growth of the British Colonies and of Their System of Government (H. E. Egerton, 1903).

The English Constitution (Bagehot, 1909).

England in the Seven Years' War (Sir J. Corbett, 1907).

B.—BOOKS ON SPECIAL PORTIONS OF THE EMPIRE OR WORLD.

The Rise and Expansion of British Dominion in India (Sir A. O. Lyall, 1894).

General Survey of the History of India (Sir Verney Lovett).

India in 1929-30.

India in 1930-31.

Modern Egypt (Cromer, 1908).

- Egypt and the Army (Elgood, 1924).
 The History of Canada (W. L. Grant).
 Report on British North America (Sir C. P. Lucas).
 The Union of South Africa (R. H. Brand, 1909).
 History of the Australasian Colonies (Jenks, 1912).
 The Lost Possessions of England (W. F. Lord, 1896).
 International Relations of the Chinese Empire (H. B. Mosse)
 (Kelly and Walsh, Shanghai).
 What's Wrong with China ? (Gilbert).
 Why China Sees Red (Putnam-Weale).

MILITARY GEOGRAPHY.

14.—*Military Geography.*

- Naval and Military Geography of the British Empire (Dr. Vaughan Cornish, 1916).
 Imperial Military Geography (Capt. D. H. Cole).
 Imperial Communications (Wakeley).
 Imperial Economy (Major R. J. Wilkinson).
 Changing Conditions of Imperial Defence (Cole).
 Imperial Military Geography (Lee).
 Military Geography of the British Commonwealth (Salt).

TACTICS.

15.—*Tactical Problems.*

Common mistakes in the solution of tactical problems and how to avoid them (Lieut.-Colonel A. B. Beauman, 1926).

Historical illustrations to Field Service Regulations, Vol. II (Major E. G. Eady).

Tactical Schemes with Solutions, 1st and 2nd Series (Kirby and Kennedy).

Elementary Tactics or the Art of War, British School (Major R. P. Pakenham-Walsh).

Lectures on F. S. R. III, 1931 (Fuller).

VII.—Schemes.

Efforts are being made to compete with demands for tactical schemes from officers working for the Staff College Examination by introducing as many new schemes as possible. In addition to reprints of several schemes, the Institution is now in possession of the complete set of schemes with solutions set at the 1932 Army Headquarters Staff College Course.

In order to simplify their issue, the schemes have been classified as follows. When ordering members are requested to give the subject of the schemes required.

STAFF COLLEGE SERIES, 1932.

Continuous Exercise No. 1 "Message Writing,"	
with solution	Re. 1/-
Continuous Exercise No. 2 "Order Writing,"	
with solution	„ 1/-
Continuous Exercise No. 3 "Advance Guards,"	
with solution	„ 1/-
Continuous Exercise No. 4 "Appreciation,"	
with solution	„ 1/-
Continuous Exercise No. 5 "Attack Orders,"	
with solution	„ 1/-
Continuous Exercise No. 6 "Defence," with	
solution	„ 1/-
Continuous Exercise No. 7 "Defence," with	
solution	„ 1/-

(NOTE.—A copy of the map, which is the same for all the above Exercises, can be had on payment of Rs. 2/- extra).

Strategy and Tactics No. 1, with map and solutions	Rs. 3/8
Strategy and Tactics No. 2, with map and solutions	„ 3/8 (Rs. 1/8 without map which is the same as for S. & T. paper No. 1).
Strategy and Tactics No. 3, with map and solutions	„ 3/8
Cavalry Exercise, with map and solutions	„ 3/8
Tactical Exercise—Night withdrawals, with map and solutions	„ 3/8
Mountain Warfare, without map and solutions	„ 1/-

VIII.—Precis of Lectures, etc.

Military History.

The East Prussian Campaign, 1914 (1931) ..	Rs. 1/8
The Third Afghan War (1931)	„ 1/8
The Palestine Campaign, I (1930)	„ 1/8
The Palestine Campaign, II (1930)	„ 1/8
American Civil War (1930)	„ 1/-
The History and Organization of the Empire (1932)	„ -/12

Tactical.

Military Evolution and the Influence of Modern Inventions on Warfare (1932)	..	Rs.	-/12
Tactical Lessons of the Great War (1932)	..	..	1/8
Cavalry, I (1932)	..	..	-/8
Cavalry, II (1932)	..	..	-/8
The Employment of Divisional Cavalry (1930)	..	..	-/8
Artillery, I (1932)	..	..	-/4
Artillery, II (1932)	..	..	-/4
Engineers, I & II (1932)	..	..	-/12
Tactical Employment of Tanks (1932)	..	..	-/12
Armoured Cars (1930)	..	..	-/8
Chemical Warfare (1932)	..	..	-/8
Night Operations (1932)	..	..	2/-
Frontier Warfare (1932)	..	..	1/8
Air Co-operation (1932)	..	..	-/12

Military Law.

Military Law, I (1932)	-/4
Military Law, II (1932)	..	..	-/4
Military Law, III (1932)	..	..	-/4
Military Law, IV (1932)	..	..	-/4
Specimen Military Law Paper (1932)	..	..	1/-

Organization, Administration and Transportation.

Mobilization (1932)	..	..	-/4
Reinforcements in War (1932)	..	..	-/4
Organization, Administration and Transportation (Peace)—Specimen Examination Paper with notes (1932)	..	..	1/8
Organization, Administration and Transportation (War)—Specimen Examination Paper (1932)	1/-
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Movements (1932)	1/8
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Supply of a Division in War (1932)	1/8
Supply Problem—Specimen Examination Paper (1932)	1/-

General.

Notes on Military Writing (1932)	..	..	-/4
Essay—Specimen Paper (1932)	..	..	1/-
Hints on Working for Examinations (1930)	..	..	-/8

IX.—Historical Research.

The U. S. I. is prepared to supply members and units with type-written copies of old Indian Army List pages, at the rate of Rs. 2 per type-written page.

The staff of the Institution is always willing to assist units, authors of regimental histories and members by searching the many old military records in the Library on their behalf.

X.—The MacGregor Memorial Medal.

1. The MacGregor Memorial Medal was founded in 1888 as a memorial to the late Major-General Sir Charles MacGregor. The medals are awarded for the best military reconnaissances or journeys of exploration of the year.

2. The following awards are made annually in the month of June:—

(a) For officers—British or Indian—silver medal.

(b) For soldiers—British or Indian—silver medal with Rs. 100 gratuity.

3. For especially valuable work a gold medal may be awarded in place of one of the silver medals, or in addition to the silver medals, whenever the administrators of the fund deem it desirable. Also the Council may award a special additional silver medal, without gratuity, to a soldier, for especially good work.

4. The award of medals is made by His Excellency the Commander-in-Chief, as Vice-Patron, and the Council of the United Service Institution, who were appointed administrators of the Fund by the MacGregor Memorial Committee.

5. Only officers and soldiers belonging to the Army in India (including those in civil employ) are eligible for the award of the medal.*

6. The medal may be worn in uniform by Indian soldiers on ceremonial parades, suspended round the neck by the ribbon issued with the medal.†

7. Personal risk to life during the reconnaissance or exploration is not a necessary qualification for the award of the medal; but in the event of two journeys being of equal value, the man who has run the greater risk, will be considered to have the greater claim to the reward.

* *N.B.*—The terms "officer" and "soldier" include those serving in the British and Indian armies and their reserves, also those serving in Auxiliary Forces, such as the Indian Auxiliary and Territorial Forces and Corps under Local Governments, Frontier Militia, Levies and Military Police, also all ranks serving in the Indian States Forces.

† Replacements of the ribbon may be obtained on payment from the Secretary, U. S. I., Simla.

MacGregor Memorial Medal—(concl'd.).

8. When the work of the year has either not been of sufficient value, or has been received too late for consideration before the Council Meeting, the medal may be awarded for any reconnaissance during previous years considered by His Excellency the Commander-in-Chief to deserve it.

MACGREGOR MEMORIAL MEDALLISTS.

(With rank of officers and soldiers at the date of the Award.)

- 1889 .. BELL, Col. M. S., v.c., R.E. (specially awarded a gold medal).
- 1890 .. YOUNGHUSBAND, Capt. F. E., King's Dragoon Guards.
- 1891 .. SAWYER, Maj. H. A., 45th Sikhs.
RAMZAN KHAN, Havildar, 3rd Sikhs.
- 1892 .. VAUGHAN, Capt. H. B., 7th Bengal Infantry.
JAGGAT SINGH, Havildar, 19th Punjab Infantry.
- 1893 .. BOWER, Capt. H., 17th Bengal Cavalry (specially awarded a gold medal).
FAZAL DAD KHAN, Dafadar, 17th Bengal Cavalry.
- 1894 .. O'SULLIVAN, Maj. G. H. W., R.E.
MULL SINGH, Sowar, 6th Bengal Cavalry.
- 1895 .. DAVIES, Capt. H. R., Oxfordshire Light Infantry.
GANGA DYAL SINGH, Havildar, 2nd Rajputs.
- 1896 .. COCKERILL, Lieut. G. K., 28th Punjab Infantry.
GHULAM NABI, Sepoy, Q. O. Corps of Guides.
- 1897 .. SWAYNE, Capt. E. J. F., 10th Rajput Infantry.
SHAHZAD MIR, Dafadar, 11th Bengal Lancers.
- 1898 .. WALKER, Capt. H. B., Duke of Cornwall's Light Infantry.
ADAM KHAN, Havildar, Q. O. Corps of Guides.
- 1899 .. DOUGLAS, Capt. J. A., 2nd Bengal Lancers.
MIHR DIN, Naik, Bengal Sappers and Miners.
- 1900 .. WINGATE, Capt. A. W. S., 14th Bengal Lancers.
GURDIT SINGH, Havildar, 45th Sikhs.
- 1901 .. BURTON, Maj. E. B., 17th Bengal Lancers.
SUNDAR SINGH, Colour Havildar, 31st Burmah Infantry.
- 1902 .. RAY, Capt. M. R. E., 7th Rajput Infantry.
TILBIR BHANDARI, Havildar, 9th Gurkha Rifles.
- 1903 .. MANIFOLD, Lieut.-Col. C. C., I.M.S.
GHULAM HUSSAIN, Lance-Dafadar, Q. O. Corps of Guides.
- 1904 .. FRASER, Capt. L. D., R.G.A.
MOGHAL BAZ, Dafadar, Q. O. Corps of Guides.
- 1905 .. RENNICK, Maj. F., 40th Pathans (specially awarded a gold medal).
MADHO RAM, Havildar, 8th Gurkha Rifles.
- 1906 .. SHAHZADA AHMAD MIR, Risaldar, 36th Jacob's Horse.
GHAFUR SHAH, Lance-Naik, Q. O. Corps of Guides.

MACGREGOR MEMORIAL MEDALLISTS—(contd.).

- 1907 .. NANGLE, Capt. M. C., 92nd Punjabis.
SHEIKH USMAN, Havildar, 103rd Mahratta Light Infantry.
- 1908 .. GIBBON, Capt. C. M., Royal Irish Fusiliers.
MALANG, Havildar, 56th Punjab Rifles.
- 1909 .. MUHAMMAD RAZA, Havildar, 106th Pioneers.
- 1910 .. SYKES, Maj. P. M., C.M.G., late 2nd Dragoon Guards (specially awarded a gold medal).
TURNER, Capt. F. G., R.E.
KHAN BAHADUR SHER JUNG, Survey of India.
- 1911 .. LEACHMAN, Capt. G. E., The Royal Sussex Regiment.
GURMUKH SINGH, Jemadar, 93rd Burmah Infantry.
- 1912 .. PRITCHARD, Capt. B. E. A., 83rd Wallajahabad Light Infantry (specially awarded a gold medal).
WILSON, Lieut. A. T., C.M.G., 32nd Sikh Pioneers.
MOHIBULLA, Lance-Dafadar, Q. V. O. Corps of Guides.
- 1913 .. ABBAY, Capt. B. N., 27th Light Cavalry.
SIRDAR KHAN, Sowar, 39th (K. G. O.) Central India Horse.
WARATONG, Havildar, Burmah Military Police (specially awarded a silver medal).
- 1914 .. BAILEY, Capt. F. M., I.A. (Political Department).
MORSHEAD, Capt. H. T., R.E.
HAIDAR ALI, Naik, 106th Hazara Pioneers.
- 1915 .. WATERFIELD, Capt. F. C., 45th Rattray's Sikhs.
ALI JUMA, Havildar, 106th Hazara Pioneers.
- 1916 .. ABDUR RAHMAN, Naik, 21st Punjabis.
ZARGHUN SHAH, Havildar, 58th Rifles (F.F.), (specially awarded a silver medal).
- 1917 .. MIAN AFRAZ GUL, Sepoy, Khyber Rifles.
- 1918 .. NOEL, Capt. E. W. C. (Political Department).
- 1919 .. KEELING, Lieut.-Colonel E. H., M.C., R.E.
ALLA SA, Jemadar, N. W. Frontier Corps.
- 1920 .. BLACKER, Capt. L. V. S., Q. V. O. Corps of Guides.
AWAL NUR, C. Q. M. Havildar, 2nd Bn., Q. V. O. Corps of Guides. (Special gratuity of Rs. 200).
- 1921 .. HOLT, Maj. A. L., Royal Engineers.
SHER ALI, Sepoy, No. 4952, 106th Hazara Pioneers.
- 1922 .. ABDUL SAMAD SHAH, Capt., O.B.E., 31st D.C. O. Lancers.
NUR MUHAMMAD, Lance-Naik, 1st Guides Infantry, F. F.
- 1923 .. BRUCE, Capt. J. G., 2/6th Gurkha Rifles.
SOHBAT, Head Constable, N.-W. F. Police.
HARI SINGH THAPA, Survey Department (specially awarded a silver medal).
- 1924 .. RAHMAT SHAH, Havildar, I.D.S.M., N.-W. F. Corps.
GHULAM HUSSAIN, Naik, N.-W. F. Corps.

MACGREGOR MEMORIAL MEDALLISTS—(*concl'd.*).

- 1925 .. SPEAR, Capt. C. R., 5/13th Frontier Force Rifles.
JABBAR KHAN, Naik, 5/13th Frontier Force Rifles.
- 1926 .. HARVEY-KELLY, Maj. C. H. G. H., D.S.O., 4/10th Baluch Regiment.
- 1927 .. LAKE, Maj. M. C., 4/4th Bombay Grenadiers.
- 1928 .. BOWERMAN, Capt. J. F., 4/10th D. C. O. Baluch Regiment.
MUHAMMAD KHAN, Havildar, Zhob Levy Corps.
- 1929 .. ABDUL HANAN, Naik, N.-W. F. Corps (with gratuity of Rs. 100).
GHULAM ALI, Dafadar, Guides Cavalry (specially awarded a silver medal).
- 1930 .. GREEN, Capt. J. H., 3/20th Burmah Rifles.
- 1931 .. O'CONNOR, Capt. R. L., 1/9th Jat Regiment.
KHIAL BADSHAH, Naik, 1/13th Frontier Force Rifles.
- 1932 .. BIRNIE, Capt. E. St. J., Sam Browne's Cavalry.
SHIB SINGH NEGI, No. 4013, Rifleman, 10/18th Royal Garhwal Rifles.

UNITED SERVICE INSTITUTION OF INDIA.

PRIZE ESSAY GOLD MEDALLISTS.

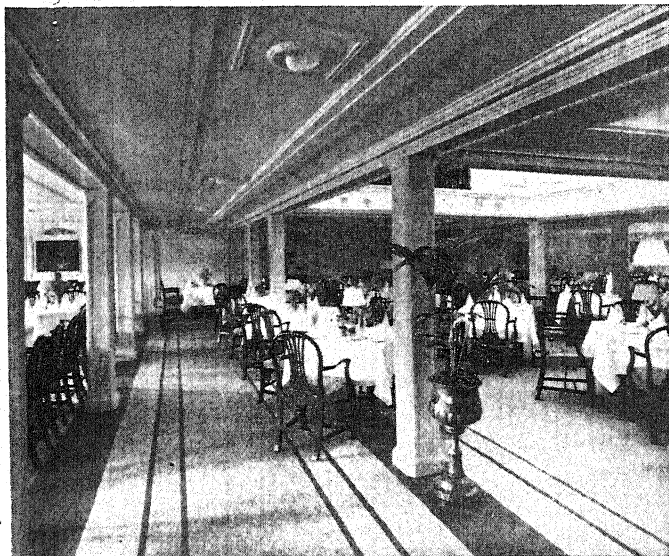
(*With Rank of Officers at the date of the Essay.*)

- 1872 .. ROBERTS, Lieut.-Col. F. S., V.C., C.B., R.A.
- 1873 .. COLQUHOUN, Capt. J. S., R.A.
- 1874 .. COLQUHOUN, Capt. J. S., R.A.
- 1879 .. ST. JOHN, Maj. O. B. C., R.E.
- 1880 .. BARROW, Lieut. E. G., 7th Bengal Infantry.
- 1882 .. MASON, Lieut. A. H., R.E.
- 1883 .. COLLEN, Maj. E. H. H., S.C.
- 1884 .. BARROW, Capt. E. G., 7th Bengal Infantry.
- 1887 .. YATE, Lieut. A. C., 27th Baluch Infantry.
- 1888 .. MAUDE, Capt. F. N., R.E.
YOUNG, Maj. G. F., 24th Punjab Infantry (specially awarded a silver medal).
- 1889 .. DUFF, Capt. B., 9th Bengal Infantry.
- 1890 .. MAGUIRE, Capt. C. M., 2nd Cavy., Hyderabad Contingent.
- 1891 .. CARDEW, Lieut. F. G., 10th Bengal Lancers.
- 1893 .. BULLOCK, Maj. G. M., Devonshire Regiment.
- 1894 .. CARTER, Capt. F. C., Northumberland Fusiliers.
- 1895 .. NEVILLE, Lieut.-Col. J. P. C., 14th Bengal Lancers.
- 1896 .. BINGLEY, Capt. A. H., 7th Bengal Infantry.
- 1897 .. NAPIER, Capt. G. S. F., Oxfordshire Light Infantry.

PRIZE ESSAY GOLD MEDALLISTS—(concl'd.).

- 1898 .. MULLALY, Maj. H., R.E.
CLAY, Capt. C. H., 43rd Gurkha Rifles (specially awarded a silver medal).
- 1899 .. NEVILLE, Col. J. P. C., S.C.
- 1900 .. THUILLIER, Capt. H. F., R.E.
LUBBOCK, Capt. G., R.E. (specially awarded a silver medal).
- 1901 .. RANKEN, Lieut.-Col. G. P. P., 46th Punjab Infantry.
- 1902 .. TURNER, Capt. H. H. F., 2nd Bengal Lancers.
- 1903 .. HAMILTON, Maj. W. G., D.S.O., Norfolk Regiment.
BOND, Capt. R. F. G., R.E. (specially awarded a silver medal).
- 1904 .. MACMUNN, Maj. G. F., D.S.O., R.F.A.
- 1905 .. COCKERILL, Maj. G. K., Royal Warwickshire Regiment.
- 1907 .. WOOD, Maj. E. J. M., 99th Deccan Infantry.
- 1908 .. JEUDWINE, Maj. H. S., R.A.
- 1909 .. MOLYNEUX, Maj. E. M. J., D.S.O., 12th Cavalry.
ELSMIE, Maj. A. M. S., 56th Rifles, F. F. (specially awarded a silver medal).
- 1911 .. Mr. D. PETRIE, M.A., Punjab Police.
- 1912 .. CARTER, Maj. B. C., The King's Regiment.
- 1913 .. THOMSON, Maj. A. G., 58th Vaughan's Rifles (F. F.).
- 1914 .. BAINBRIDGE, Lieut.-Col. W. F., D.S.O., 51st Sikhs (F. F.).
NORMAN, Maj. C. L., M.V.O., Q. V. O. Corps of Guides (specially awarded a silver medal).
- 1916 .. CRUM, Maj. W. E., V.D., Calcutta Light Horse.
- 1917 .. BLAKER, Maj. W. F., R.F.A.
- 1918 .. GOMPERTZ, Capt. A. V., M.C., R.E.
- 1919 .. GOMPERTZ, Capt. M. L. A., 108th Infantry.
- 1920 .. KEEN, Lt.-Col. F. S., D.S.O., 2/15th Sikhs.
- 1922 .. MARTIN, Maj. H. G., D.S.O., O.B.E., R.F.A.
- 1923 .. KEEN, Col. F. S., D.S.O., I.A.
- 1926 .. DENNYS, Maj. L. E., M.C., 4/12th Frontier Force Regiment.
- 1927 .. HOGG, Maj. D. McA., M.C., R.E.
- 1928 .. FRANKS, Maj. K. F., D.S.O., 5th Royal Mahrattas.
- 1929 .. DENNYS, Maj. L. E., M.C., 4/12th Frontier Force Regiment.
- 1930 .. DURNFORD, Maj. C. M. P., 4/6th Rajputana Rifles.
- 1931 .. FORD, Lt.-Col. G. N., 2/5th Mahratta Light Infantry.
- 1932 .. THURBURN, Lt. R. G., The Cameronians (Scottish Rifles).

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United Service Institution of India.

JULY 1933.

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I.—New Members.

The following new members joined the Institution from 1st March to 31st May 1933 :—

ORDINARY MEMBERS.

The Revd. P. N. F. Young, M.A.	Capt. W. S. Hushar
J. B. Shearer, Esq., I.C.S.	„ J. F. S. McLaren.
T. B. Tate, Esq., I.S.E.	„ H. D. K. Money.
Major-General G. H. Addison, C.B.,	„ H. L. Ogden.
C.M.G., D.S.O.	„ J. A. C. O'Hara.
Brigadier D. E. Robertson, C.B.,	„ J. McI. Robertson, M.C.
D.S.O.	„ R. G. Sanders.
Lt.-Col. S. G. Simpson	„ D. R. St. J. Shannon.
Major E. B. de Fonblanque	„ F. Shearburn.
„ W. P. MacLaughlin, M.C.	„ A. E. Swann.
„ H. V. McWatters	„ R. D. C. Taylor.
„ W. H. S. Schofield	„ T. H. E. Woods.
Capt. F. G. Allen	Lieut. P. M. Alpin.
„ O. R. Bethune	„ W. P. Careless.
„ P. T. Clarke	„ J. G. E. Hickson.
„ A. R. Fallon	„ P. L. A. Hill.
„ I. M. Goff	„ S. A. Lowman.
„ R. E. Holloway, M.B.E.	„ R. A. H. Soames.
„ R. E. Hunt	2/Lieut. M. Haya-ud-Din.
	2/Lieut. V. D. Jayal.

II.—The Journal.

The Institution publishes a Quarterly Journal in the months of January, April, July and October, which is issued postage free to members in any part of the world. Non-members may obtain the Journal at Rs. 2 annas 8 per number, or Rs. 10 per annum. Advertisement rates may be obtained on application to the Secretary.

III.—Contributions to the Journal.

Articles may vary in length from two thousand to ten thousand words. Payment is made on publication at from Rs. 40 to Rs. 100 in accordance with the value and length of the contribution.

With reference to Regulations for the Army in India, paragraph 204 and King's Regulations, paragraph 522, action to obtain the sanction of His Excellency the Commander-in-Chief to the publication

of any article in the Journal of the United Service Institution of India will be taken by the Executive Committee of the Institution.

The Committee reserve to themselves the right to omit any matter which they consider objectionable.

Articles are only accepted on these conditions.

IV.—Reading Room and Library.

The United Service Institution of India is situated in the Mall, Simla, and is open all the year round—including Sundays—from 9. A.M., until sunset. The Reading Room of the Institution is provided with the leading illustrated papers, newspapers, magazines and journals of military interest.

There is a well-stocked library in the Institution, from which members can obtain books on loan free, in accordance with the following rules :—

(1) The Library is only open to members and honorary members, who are requested to look upon books as not transferable to their friends.

(2) No book shall be taken from the Library without making the necessary entry in the register. Members residing permanently or temporarily in Simla are requested to enter their addresses.

(3) A member shall not be allowed at one time, more than three books or sets of books.

(4) No particular limit is set as to the number of days for which a member may keep a book, the Council being desirous of making the Library as useful as possible to members ; but if after the expiration of a fortnight from date of issue it is required by any other member it will be re-called.

(5) Applications for books from members at out-stations are dealt with as early as possible, and books are despatched post free per Registered Parcel Post. They must be returned carefully packed per Registered Parcel Post within one month of date of issue.

(6) If a book is not returned at the end of one month, it must be paid for without the option of return, if so required by the Executive Committee. Lost and defaced books shall be replaced at the cost of the member to whom they were issued. In the case of lost books

which are out of print the value shall be fixed by the Executive Committee, and the amount, when received, spent in the purchase of a new book.

(7) The issue of a book under these rules to any member implies the latter's compliance with the rules, and the willingness to have them enforced, if necessary, against him.

(8) The catalogue of the Library is completed to 31st March 1924. Price Rs. 3-8-0 or postage paid Rs. 3-14-0. An addendum completed up to 30th September 1927 is available. Price annas 8 *plus* postage annas 4. A complete up-to-date catalogue is under compilation and will be available for issue towards the end of the current year.

V.—New Books.

BOOKS RECEIVED.

<i>Title.</i>	<i>Published.</i>	<i>Author.</i>
What Would be the character of a New War ?	.. 1931 ..	Enquiry organised by the Inter-Parliamentary Union.
The Memoirs of Marshal Joffre, 2 Vols.	1932 ..	Translated by Col. T. Bentley Mott.
Twenty Years in Tibet	.. 1932 ..	David Macdonald.
Political India, 1832-1932	.. 1932 ..	Sir John Cumming.
The Martial Races of India	.. 1932 ..	Sir George MacMunn.
Red Russia Arms	.. 1932 ..	J. B. White.
Imperial Defence and Capture at Sea in War	.. 1932 ..	Admiral Sir H. W. Richmond.
The Iraq Levies, 1915-1932,	.. 1932 ..	Brigadier J. Gilbert Browne.
The Merchant Venturers of London	.. 1933 ..	Charles Grey.
Planned Money	.. 1933 ..	Sir Basil Blackett.
How Britain is Governed (revised edition)	.. 1933 ..	Ramsay Muir.
Japan—The Mistress of the Pacific ?	.. 1933 ..	Col. P. T. Etherton and H. H. Tiltman.
Jacka's Mob	.. 1933 ..	E. J. Rule.
The History of the Russian Revolution, Vols. II & III	.. 1933 ..	Leon Trotsky.
The Tinder Box of Asia	.. 1933 ..	George E. Sokolsky.
The Future of Infantry	.. 1933 ..	Liddell Hart.
The Wells of Beersheba—A Light Horse Legend	.. 1933 ..	Frank Dalby Davison.

BOOKS ON ORDER.

- The Political Handbook of the World, 1933 .. Edited by W. A. Mallory.
- War in the Air 1936 .. Major Helden.
- The Official History of the Great War, Operations in Macedonia from the beginning of the war to the Spring of 1917, Vol. I .. Capt. Cyril Falls.
- Egypt Since Cromer, 1904-1919, Vol. I .. Lord Lloyd.

VI.—Promotion Examinations.

(a) Campaigns.

The following table shows the campaigns on which military history papers will be set from October 1933 for Lieutenants for promotion to Captain in sub-head *b* (iii) and for Captains for promotion to Major in sub-head *d* (iii), with a list of the books recommended for the study of each :—

<i>Dates of Examination.</i>	<i>Campaigns.</i>	<i>Books recommended.</i>
October 1933 .. March 1934	Egypt and Palestine, as covered by the "History of the Great War—Military Operations, Egypt and Palestine, Vols. I & II.	"History of the Great War—Military Operations—Egypt and Palestine, Vol. II, Parts I & II" (Cyril Falls).
March 1934 .. October 1934 .. March 1935	France and Belgium, 1914 ; up to and including the Aisne.	"The Palestine Campaign" (Wavell). "Official History of the Great War—Military Operations—France and Belgium, 1914, Vol. I." "40 days in 1914" (Maurice).
October 1934 .. March 1935 .. October 1935	Mesopotamia, up to and including the capture of Kut-al-Amara, October 1915.	"Official History of the Great War—Military Operations—Mesopotamia, Vol. I." "Brief History of the Mesopotamian Campaign" (Evans). "Tigris Gunboats" (Nunn).

(b) Other Subjects.

In addition to the manuals and regulations mentioned in K. R. and R. A. I., the following books are recommended :—

- “Modern Military Administration, Organization and Transportation” (Harding-Newman).
- “Military Organization and Administration,” 1932 (Lindsell).
- “A. & Q. or Military Administration in War” (Lindsell).
- “Military Law,” 1932 (Banning).
- “The Defence of Duffers’ Drift,” 1929 (Swinton).
- “Tactical Schemes with Solutions, Series I and II” (Kirby and Kennedy).
- “Imperial Military Geography” (Cole).
- “Elements of Imperial Defence” (Boycott).
- “Changing Conditions of Imperial Defence” (Cole).

VII.—Staff College Examination.—(See Staff College (Camberley) Regulations 1930, obtainable from the Manager of Publications, Delhi or Calcutta).

(a) Campaigns.

The following campaigns have been set for the Staff College Entrance Examination :—

Strategy of—

Napoleon’s Campaign of 1796 in Italy.

Waterloo Campaign.

Peninsula Campaign up to and including the Battle of Salamanca.

The strategy and broad tactical lessons of—

The American Civil War.

Russo-Japanese War up to and including the Battle of Liao-Yang.

The Great War in France, Belgium, Mesopotamia, the Dardanelles and Palestine, including a knowledge of the influence on the strategy in these areas of the events in other theatres of the War.

The East Prussian Campaign, 1914.

The strategy and tactics of—

The Palestine Campaign from 9th November 1917 to the end of the War.

The action of the British Expeditionary Force in France and Belgium up to and including the Battle of the Aisne,

The 3rd Afghan War, 1919.

(b) The following books are recommended for the above campaigns :—

(i) *The Strategy of Napoleon's Campaign in Italy*, 1796.

Rise of General Buonaparte (Spencer Williamson).

Principles of War (Foch).

Vol. XI of 11th Edition of the Encyclopædia Britannica.

(ii) *The Strategy of the Waterloo Campaign*, 1815.

Six British Battles. (Belloc).

Napoleon and Waterloo (Becke).

11th Edition of the Encyclopædia Britannica.

(iii) *The Strategy of the Peninsula Campaign, up to and including the Battle of Salamanca.*

Short History of the British Army (Sheppard).

Life of Wellington (Fortescue).

(iv) *The Strategy and Broad Tactical Lessons of the American Civil War.*

True History of the Civil War (G. C. Lee).

History of the Civil War in the United States, 1861-65 (W. B.

Woods and J. E. Edmunds).

Stonewall Jackson (G. F. R. Henderson).

Robert E. Lee, the Soldier (Maurice).

The Generalship of Ulysses S. Grant (Fuller).

Sherman (Liddell Hart).

(v) *The Strategy and Broad Tactical Lessons of the Russo-Japanese War, 1904, up to and including the Battle of Liao-Yang.*

Lectures on the Strategy of the Russo-Japanese War (Bird).

Campaign of Liao-Yang (Rowan-Robinson).

The Japanese in Manchuria (Cordonnier).

Critical Comments only in the "Official Account: The Russo-Japanese War (Naval and Military)."

Staff Officer's Scrap Book (Ian Hamilton).

(vi) *The Strategy and Broad Tactical Lessons of the Great War in France, Belgium, Mesopotamia, the Dardanelles and Palestine, including a knowledge of the influence on the strategy in these areas of the events in other theatres of War,*

Official Histories—Military Operations, France and Belgium
 Vols. I—V. Egypt and
 Palestine Vol. I and
 Vol. II, parts I and II.
 Gallipoli, Vols. I and II.
 Mesopotamia, Vols. I and
 II.

The Great War of 1914-18 (Aston).

The Real War (Liddell Hart).

The World Crisis (Winston Churchill).

Brief History of the Mesopotamian Campaign (Evans).

The Palestine Campaign (Wavell).

(vii) *The Strategy and Broad Tactical Lessons of the East Prussian Campaign, 1914.*

Tannenburg—First 30 days in East Prussia (Ironside).

The World Crisis, Eastern Front, 1931 (Winston Churchill).

The Real War (Liddell Hart).

(viii) *The Strategy and Tactics of the Palestine Campaign from 9th November 1917 to the end of the War.*

The Official History, Military Operations, Egypt and Palestine,
 from June 17th to the end of the War, Vol. II, Parts I and
 II.

The Palestine Campaign (Wavell).

(ix) *The Strategy and Tactics of the action of the British Expeditionary Force in France and Belgium up to and including the Battle of the Aisne.*

The Official History, Military Operations, France and Belgium,
 Vol. I.

40 Days in 1914 (Maurice).

Liaison, 1914 (E. L. Spears).

(x) *The Strategy and Tactics of the 3rd Afghan War, 1919.*

The Official Account (General Staff, India, 1926).

(c) In addition to the above, the following books are recommended for the various subjects :—

(i) *Strategy and Tactics.*

Soldiers and Statesmen (F. M. Sir W. Robertson).

Governments and War (Maurice).

British Strategy (Maurice).

Lectures on F. S. R. II (Fuller).

Lectures on F. S. R. III (Fuller).

War and Western Civilization, 1832—1932 (Fuller).

The British Way in Warfare (Liddell Hart).

Military History for the Staff College Entrance Examination (Sheppard).

In the Wake of the Tank (Martel).

Tactical Schemes with Solutions, Series I and II (Kirby and Kennedy).

Passing it on (Genl. Sir A. Skeen).

Report of the Dardanelles Commission.

(ii) *Organization, Administration and Transportation.*

Military Organization and Administration, 1932 (Lindsell).

A. & Q. or Military Administration in War (Lindsell).

Modern Military Administration, Organization and Transportation (Harding-Newman).

Administrative Schemes with Solutions (Kirby and Murison).

Outline of the Development of the British Army (Hastings-Anderson).

Short History of the British Army to 1914 (Sheppard).

The Annual Army Estimates of Effective and Non-Effective Services (H. M. S. O.).

Notes on the Land Forces of the British Dominions, Colonies, Protectorates and Mandated Territories.

The Statesman's Year Book.

Army List.

League of Nations : Armaments Year Book, 1932 (Special Edition).

War Office Official Handbooks of Foreign Armies.

Declaration of British Disarmament Policy, 1932.

Commonsense about Disarmament (Lefebure).

(iii) *Military Law.*

Military Law, 1932 (Banning).

(iv) *The History and Organization of the Empire.*

Short History of the British Commonwealth (Ramsay).

Short History of British Expansion (Williamson).

British Empire (Basil Williams).

General Survey of the History of India (Sir Verney Lovett).

India in 1929-30, 1930-31, 1931-32.

Problem of the N. W. F., 1890-1908, with a survey of policy since 1849 (Davies).

Modern Egypt (Cromer, 1908).

Egypt since Cromer, Vol. I. (Lord Lloyd).

The History of Canada (W. L. Grant).

The Union of South Africa (R. H. Brand).

History of the Australasian Colonies (Jenks).

Imperial Military Geography (Cole).

Imperial Communications (Wakely).

Changing Conditions of Imperial Defence (Cole).

Elements of Imperial Defence (Boycott).

VIII.—Schemes, etc.

Efforts are being made to compete with demands for tactical schemes from officers working for the Staff College Examination by introducing as many new schemes as possible. In addition to reprints of several schemes, the Institution is now in possession of the complete set of schemes with solutions set at the 1932 Army Headquarters Staff College Course. Those for 1933 will become available later.

In order to simplify their issue, the schemes have been classified as follows. When ordering members are requested to give the subject of the schemes required.

STAFF COLLEGE SERIES, 1932.

(A)—Tactical Papers.

Continuous Exercise No. 1 "Message Writing,"	
with solution	Re. 1/-
Continuous Exercise No. 2 "Order Writing,"	
with solution	„ 1/-
Continuous Exercise No. 3 "Advance Guards,"	
with solution	„ 1/-
Continuous Exercise No. 4 "Appreciation,"	
with solution	„ 1/-
Continuous Exercise No. 5 "Attack Orders,"	
with solution	„ 1/-
Continuous Exercise No. 6 "Defence," with	
solution	„ 1/-

Continuous Exercise No. 7 "Defence," with solution	Re. 1/-
(NOTE.—A copy of the map, which is the same for all the above Exercises, can be had on payment of Rs. 2/- extra.)	
Strategy and Tactics No. 1, with map and solu- tions	Rs. 3/8
Strategy and Tactics No. 2, with map and solu- tions	„ 3/8 (Rs. 1/8 without map which is the same as for S. & T. paper No. 1.)
Strategy and Tactics No. 3, with map and solu- tions	„ 3/8
Cavalry Exercise, with map and solutions	„ 3/8
Tactical Exercise—Night withdrawals, with map and solutions	„ 3/8
Mountain Warfare, without map and solutions	„ 1/-

(B)—Precis of Lectures, etc.*Military History.*

The East Prussian Campaign, 1914 (1931) ..	Rs. 1/8
The Third Afghan War (1931)	„ 1/8
American Civil War (1930)	„ 1/-
The History and Organization of the Empire (1932)	„ -/12

Tactical.

Military Evolution and the Influence of Modern Inventions on Warfare (1932) ..	Rs. -/12
Tactical Lessons of the Great War (1932) ..	„ 1/8
Cavalry, I (1932)	„ -/8
Cavalry, II (1932)	„ -/8
The Employment of Divisional Cavalry (1930) ..	„ -/8
Artillery, I (1932)	„ -/4
Artillery, II (1932)	„ -/4
Engineers, I & II (1932)	„ -/12
Tactical Employment of Tanks (1932)	„ -/12
Armoured Cars (1930)	„ -/8
Chemical Warfare (1932)	„ -/8

Night Operations (1932)	..	..	Rs. 2/-
Frontier Warfare (1932)	..	..	„ 1/8
Air Co-operation (1932)	..	..	„ -/12

Military Law.

Military Law, I (1932)	„ -/4
Military Law, II (1932)	..	..	„ -/4
Military Law, III (1932)	..	..	„ -/4
Military Law, IV (1932)	..	..	„ -/4
Specimen Military Law Paper (1932)	..	..	„ 1/-

Organization, Administration and Transportation.

Mobilization (1932)	..	..	„ -/4
Reinforcements in War (1932)	..	..	„ -/4
Organization, Administration and Transportation (Peace)—Specimen Examination Paper with notes (1932)	..	..	„ 1/8
Organization, Administration and Transportation (War)—Specimen Examination Paper (1932)	..	..	„ 1/-
“ Q ” Services in Peace (1932)	..	..	„ 1/8
Movements (1932)	..	..	„ 1/8
Movements—Specimen Examination Paper (1932)	..	..	„ 1/-
Supply of a Division in War (1932)	..	..	„ 1/8
Supply Problem—Specimen Examination Paper (1932)	..	..	„ 1/-

General.

Notes on Military Writing (1932)	..	..	„ -/4
Essay—Specimen Paper (1932)	..	..	„ 1/-
Hints on Working for Examinations (1930)	..	..	„ -/8

IX.—Historical Research.

The U. S. I. is prepared to supply members and units with type-written copies of old Indian Army List pages, at the rate of Rs. 2 per type-written page.

The staff of the Institution is always willing to assist units, authors of regimental histories and members by searching the many old military records in the Library on their behalf.

X.—The MacGregor Memorial Medal.

1. The MacGregor Memorial Medal was founded in 1888 as a memorial to the late Major-General Sir Charles MacGregor. The medals are awarded for the best military reconnaissances or journeys of exploration of the year.

MacGregor Memorial Medal—(contd.).

2. The following awards are made annually in the month of June:—

- (a) For officers—British or Indian—silver medal.
- (b) For soldiers—British or Indian—silver medal with Rs. 100 gratuity.

3. For especially valuable work a gold medal may be awarded in place of one of the silver medals, or in addition to the silver medals, whenever the administrators of the fund deem it desirable. Also the Council may award a special additional silver medal, without gratuity to a soldier, for especially good work.

4. The award of medals is made by His Excellency the Commander-in-Chief, as Vice-Patron, and the Council of the United Service Institution, who were appointed administrators of the Fund by the MacGregor Memorial Committee.

5. Only officers and soldiers belonging to the Army in India (including those in civil employ) are eligible for the award of the medal.*

6. The medal may be worn in uniform by Indian soldiers on ceremonial parades, suspended round the neck by the ribbon issued with the medal.†

7. Personal risk to life during the reconnaissance or exploration is not a necessary qualification for the award of the medal; but in the event of two journeys being of equal value, the man who has run the greater risk, will be considered to have the greater claim to the reward.

8. When the work of the year has either not been of sufficient value, or has been received too late for consideration before the Council Meeting, the medal may be awarded for any reconnaissance during previous years considered by His Excellency the Commander-in-Chief to deserve it.

MACGREGOR MEMORIAL MEDALLISTS.

(With rank of officers and soldiers at the date of the Award.)

- 1889 .. BELL, Col. M. S., v.c., R.E. (specially awarded a gold medal).
- 1890 .. YOUNGHUSBAND, Capt. F. E., King's Dragoon Guards.
- 1891 .. SAWYER, Maj. H. A., 45th Sikhs.
- RAMZAN KHAN, Havildar, 3rd Sikhs.

* N.B.—The terms "officer" and "soldier" include those serving in the British and Indian armies and their reserves, also those serving in Auxiliary Forces, such as the Indian Auxiliary and Territorial Forces and Corps under Local Governments, Frontier Militia, Levies and Military Police, also all ranks serving in the Indian States Forces.

† Replacements of the ribbon may be obtained on payment from the Secretary, U. S. I., Simla.

MACGREGOR MEMORIAL MEDALLISTS--(contd.).

- 1892 .. VAUGHAN, Capt. H. B., 7th Bengal Infantry.
JAGGAT SINGH, Havildar, 19th Punjab Infantry.
- 1893 .. BOWER, Capt. H., 17th Bengal Cavalry (specially awarded a gold medal).
FAZAL DAD KHAN, Dafadar, 17th Bengal Cavalry.
- 1894 .. O'SULLIVAN, Maj. G. H. W., R.E.
MULL SINGH, Sowar, 6th Bengal Cavalry.
- 1895 .. DAVIES, Capt. H. R., Oxfordshire Light Infantry.
GANGA DYAL SINGH, Havildar, 2nd Rajputs.
- 1896 .. COCKERILL, Lieut. G. K., 28th Punjab Infantry.
GHULAM NABI, Sepoy, Q. O. Corps of Guides.
- 1897 .. SWAYNE, Capt. E. J. F., 10th Rajput Infantry.
SHAHZAD MIR, Dafadar, 11th Bengal Lancers.
- 1898 .. WALKER, Capt. H. B., Duke of Cornwall's Light Infantry.
ADAM KHAN, Havildar, Q. O. Corps of Guides.
- 1899 .. DOUGLAS, Capt. J. A., 2nd Bengal Lancers.
MIHR DIN, Naik, Bengal Sappers and Miners.
- 1900 .. WINGATE, Capt. A. W. S., 14th Bengal Lancers.
GURDIT SINGH, Havildar, 45th Sikhs.
- 1901 .. BURTON, Maj. E. B., 17th Bengal Lancers.
SUNDAR SINGH, Colour Havildar, 31st Burmah Infantry.
- 1902 .. RAY, Capt. M. R. E., 7th Rajput Infantry.
TILBIR BHANDARI, Havildar, 9th Gurkha Rifles.
- 1903 .. MANIFOLD, Lieut.-Col. C. C., I.M.S.
GHULAM HUSSAIN, Lance-Dafadar, Q. O. Corps of Guides.
- 1904 .. FRASER, Capt. L. D., R.G.A.
MOGHAL BAZ, Dafadar, Q. O. Corps of Guides.
- 1905 .. RENNICK, Maj. F., 40th Pathans (specially awarded a gold medal).
MADHO RAM, Havildar, 8th Gurkha Rifles.
- 1906 .. SHAHZADA AHMAD MIR, Risaldar, 36th Jacob's Horse.
GHAFUR SHAH, Lance-Naik, Q. O. Corps of Guides.
- 1907 .. NANGLE, Capt. M. C., 92nd Punjabis.
SHEIKH USMAN, Havildar, 103rd Mahratta Light Infantry.
- 1908 .. GIBBON, Capt. C. M., Royal Irish Fusiliers.
MALANG, Havildar, 56th Punjab Rifles.
- 1909 .. MUHAMMAD RAZA, Havildar, 106th Pioneers.
- 1910 .. SYKES, Maj. P. M., C.M.G., late 2nd Dragoon Guards (specially awarded a gold medal).
TURNER, Capt. F. G., R.E.
KHAN BAHADUR SHER JUNG, Survey of India.
- 1911 .. LEACHMAN, Capt. G. E., The Royal Sussex Regiment.
GURMUKH SINGH, Jemadar, 93rd Burmah Infantry.

MACGREGOR MEMORIAL MEDALLISTS—(contd.).

- 1912 .. PRITCHARD, Capt. B. E. A., 83rd Wallajahabad Light Infantry
(specially awarded a gold medal).
WILSON, Lieut. A. T., C.M.G., 32nd Sikh Pioneers.
MOHIBULLA, Lance-Dafadar, Q. V. O. Corps of Guides.
- 1913 .. ABBAY, Capt. B. N., 27th Light Cavalry.
SIRDAR KHAN, Sowar, 39th (K. G. O.) Central India Horse.
WARATONG, Havildar, Burmah Military Police (specially
awarded a silver medal).
- 1914 .. BAILEY, Capt. F. M., I.A. (Political Department).
MORSHEAD, Capt. H. T., R.E.
HAIDAR ALI, Naik, 106th Hazara Pioneers.
- 1915 .. WATERFIELD, Capt. F. C., 45th Rattray's Sikhs.
ALI JUMA, Havildar, 106th Hazara Pioneers.
- 1916 .. ABDUR RAHMAN, Naik, 21st Punjabis.
ZARGHUN SHAH, Havildar, 58th Rifles (F.F.), (specially award-
ed a silver medal).
- 1917 .. MIAN AFRAZ GUL, Sepoy, Khyber Rifles.
- 1918 .. NOEL, Capt. E. W. C. (Political Department).
- 1919 .. KEELING, Lieut.-Colonel E. H., M.C., R.E.
ALLA SA, Jemadar, N.-W. Frontier Corps.
- 1920 .. BLACKER, Capt. L. V. S., Q. V. O. Corps of Guides.
AWAL NUR, C. Q. M. Havildar, 2nd Bn., Q. V. O. Corps of
Guides. (Special gratuity of Rs. 200).
- 1921 .. HOLT, Maj. A. L., Royal Engineers.
SHER ALI, Sepoy, No. 4952, 106th Hazara Pioneers.
- 1922 .. ABDUL SAMAD SHAH, Capt., O.B.E., 31st D.C. O. Lancers.
NUR MUHAMMAD, Lance-Naik, 1st Guides Infantry, F. F.
- 1923 .. BRUCE, Capt. J. G., 2/6th Gurkha Rifles.
SOHBAT, Head Constable, N.-W. F. Police.
HARI SINGH THAPA, Survey Department (specially awarded a
silver medal).
- 1924 .. RAHMAT SHAH, Havildar, I.D.S.M., N.-W. F. Corps.
GHULAM HUSSAIN, Naik, N.-W. F. Corps.
- 1925 .. SPEAR, Capt. C. R., 5/13th Frontier Force Rifles.
JABBAR KHAN, Naik, 5/13th Frontier Force Rifles.
- 1926 .. HARVEY-KELLY, Maj. C. H. G. H., D.S.O., 4/10th Baluch
Regiment.
- 1927 .. LAKE, Maj. M. C., 4/4th Bombay Grenadiers.
- 1928 .. BOWERMAN, Capt. J. F., 4/10th D. C. O. Baluch Regiment.
MUHAMMAD KHAN, Havildar, Zhob Levy Corps.
- 1929 .. ABDUL HANAN, Naik, N.-W. F. Corps (with gratuity of Rs. 100).
GHULAM ALI, Dafadar, Guides Cavalry (specially awarded a
silver medal).
- 1930 .. GREEN, Capt. J. H., 3/20th Burmah Rifles.

MACGREGOR MEMORIAL MEDALLISTS—(concl'd.).

- 1931 .. O'CONNOR, Capt. R. L., 1/9th Jat Regiment.
 KHIAL BADSHAH, Naik, 1/13th Frontier Force Rifles.
- 1932 .. BIRNIE, Capt. E. St. J., Sam Browne's Cavalry.
 SHIB SINGH NEGI, No. 4013, Rifleman, 10/18th Royal Garhwal Rifles.
- 1933 .. ABDUL GHAFUR, Havildar, K.G.O., Bengal Sappers and Miners.

UNITED SERVICE INSTITUTION OF INDIA

PRIZE ESSAY GOLD MEDALLISTS.

(With Rank of Officers at the date of the Essay.)

- 1872 .. ROBERTS, Lieut.-Col. F. S., V.C., C.B., R.A.
- 1873 .. COLQUHOUN, Capt. J. S., R.A.
- 1874 .. COLQUHOUN, Capt. J. S., R.A.
- 1879 .. ST. JOHN, Maj. O. B. C., R.E.
- 1880 .. BARROW, Lieut. E. G., 7th Bengal Infantry
- 1882 .. MASON, Lieut. A. H., R.E.
- 1883 .. COLLEN, Maj. E. H. H., S.C.
- 1884 .. BARROW, Capt. E. G., 7th Bengal Infantry.
- 1887 .. YATE, Lieut. A. C., 27th Baluch Infantry.
- 1888 .. MAUDE, Capt. F. N., R.E.
 YOUNG, Maj. G. F., 24th Punjab Infantry (specially awarded a silver medal).
- 1889 .. DUFF, Capt. B., 9th Bengal Infantry.
- 1890 .. MAGUIRE, Capt. C. M., 2nd Cavy., Hyderabad Contingent.
- 1891 .. CARDEW, Lieut. F. G., 10th Bengal Lancers.
- 1893 .. BULLOCK, Maj. G. M., Devonshire Regiment.
- 1894 .. CARTER, Capt. F. C., Northumberland Fusiliers.
- 1895 .. NEVILLE, Lieut.-Col. J. P. C., 14th Bengal Lancers.
- 1896 .. BINGLEY, Capt. A. H., 7th Bengal Infantry.
- 1897 .. NAPIER, Capt. G. S. F., Oxfordshire Light Infantry.
- 1898 .. MULLALLY, Maj. H., R.E.
 CLAY, Capt. C. H., 43rd Gurkha Rifles (specially awarded a silver medal).
- 1899 .. NEVILLE, Col. J. P. C., S.C.
- 1900 .. THUILLIER, Capt. H. F., R.E.
 LUBBOCK, Capt. G., R.E. (specially awarded a silver medal).
- 1901 .. RANKEN, Lieut.-Col. G. P. P., 46th Punjab Infantry.
- 1902 .. TURNER, Capt. H. H. F., 2nd Bengal Lancers.
- 1903 .. HAMILTON, Maj. W. G., D.S.O., Norfolk Regiment.
 BOND, Capt. R. F. G., R.E. (specially awarded a silver medal).
- 1904 .. MACMUNN, Maj. G. F., D.S.O., R.F.A.

PRIZE ESSAY GOLD MEDALLISTS—(concl'd.).

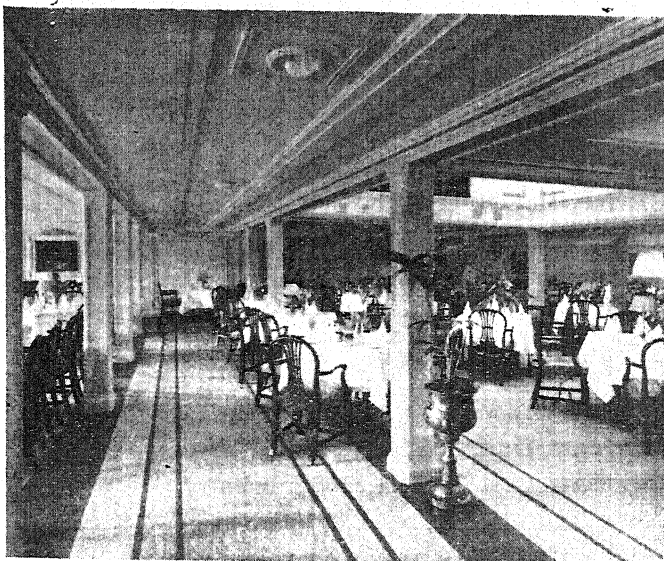
- 1905 .. COCKERILL, Maj. G. K., Royal Warwickshire Regiment.
 1907 .. WOOD, Maj. E. J. M., 99th Deccan Infantry.
 1908 .. JEUDWINE, Maj. H. S., R.A.
 1909 .. MOLYNEUX, Maj. E. M. J., D.S.O., 12th Cavalry.
 ELSMIE, Maj. A. M. S., 56th Rifles, F. F. (specially awarded a silver medal).
 1911 .. Mr. D. PETRIE, M.A., Punjab Police.
 1912 .. CARTER, Maj. B. C., The King's Regiment.
 1913 .. THOMSON, Maj. A. G., 58th Vaughan's Rifles (F. F.).
 1914 .. BAINBRIDGE, Lieut.-Col. W. F., D.S.O., 51st Sikhs (F. F.).
 NORMAN, Maj. C. L., M.V.O., Q. V. O. Corps of Guides
 (specially awarded a silver medal).
 1916 .. CRUM, Maj. W. E., V.D., Calcutta Light Horse.
 1917 .. BLAKER, Maj. W. F., R.F.A.
 1918 .. GOMPERTZ, Capt. A. V., M.C., R.E.
 1919 .. GOMPERTZ, Capt. M. L. A., 108th Infantry.
 1920 .. KEEN, Lt.-Col. F. S., D.S.O., 2/15th Sikhs.
 1922 .. MARTIN, Maj. H. G., D.S.O., O.B.E., R.F.A.
 1923 .. KEEN, Col. F. S., D.S.O., I.A.
 1926 .. DENNYS, Maj. L. E., M.C., 4/12th Frontier Force Regiment.
 1927 .. HOGG, Maj. D. McA., M.C., R.E.
 1928 .. FRANKS, Maj. K. F., D.S.O., 5th Royal Mahrattas.
 1929 .. DENNYS, Maj. L. E., M.C., 4/12th Frontier Force Regiment.
 1930 .. DURNFORD, Maj. C. M. P., 4/6th Rajputana Rifles.
 1931 .. FORD, Lt.-Col. G. N., 2/5th Mahratta Light Infantry.
 1932 .. THURBURN, Lt. R. G., The Cameronians (Scottish Rifles).

NOTICE.

The Council has decided—

- (i) In order to assist Officers suffering from the cut in pay, payment of the Entrance Fee be suspended during 1933.
- (ii) With effect from the 1st January 1934, members of ten years' standing who retire from the Service may continue their membership on payment of the reduced subscription of s10/6 per annum.
- (iii) Cadets of the Indian Military Academy are eligible for membership of the Institution.
- (iv) Officers of the Indian States Forces are eligible to compete in the Gold Medal Prize Essay Competition.

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OCTOBER 1933.

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I.—New Members.

The following new members joined the Institution from 1st June to 21st August 1933 :—

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„ E. J. Ross, O.B.E., M.C.	„ L. C. Bull, M.C.
„ S. W. Sackville-Hamilton,	„ L. B. D. Burns.
D.S.O.	„ R. J. E. Cadogan-
„ H. J. Simson, M. C.	Rawlinson.
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„ R. N. Khosla, M.B.	„ S. G. Hudson.
„ H. J. King, M.B.E.	„ A. P. Imlay, D.S.O.
„ Krishna Singh.	„ N. J. G. Jones.
„ E. G. Savage.	„ R. I. Jones.
„ W. R. A. Scott.	„ T. P. Jones.

Captain J. D. S. Keenan.	Captain N. D. Wingrove.
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„ F. C. A. Kerin.	„ O. G. Woodhouse.
„ P. C. F. Kirkham.	Lieut. H. E. Boulter.
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„ J. B. McCance.	„ F. G. Cuerden.
„ J. D. Milne.	„ G. S. Dhillon.
„ G. R. O.'N. Moriarty.	„ C. D. F. A. Farquharson.
„ T. Nathu Singh.	„ R. J. O. Fox.
„ R. M. Newton-King.	„ E. L. Grant.
„ A. W. Orgill.	„ A. R. C. K. Greenway.
„ R. W. Peters.	„ D. J. B. Houchin.
„ W. N. Pettigrew.	„ B. P. Hughes.
„ C. F. Pope.	„ H. Hullock.
„ G. G. Pryce.	„ S. M. Husain.
„ W. A. Putnam.	„ Jamal Dar.
„ F. L. Roberts.	„ Kalwant Singh.
„ H. W. Sanders.	„ J. C. Katoch.
„ R. Seeger.	„ J. A. Keogh.
„ J. Spence, M. C.	„ R. J. F. A. Lawder.
„ H. H. Sperling.	„ J. E. M. E. C. Leask.
„ J. O. Steabben.	„ J. M. Lee.
„ L. Steveni, O.B.E., M.C.	„ J. M. McGill.
„ B. L. Sundius-Smith.	„ I. O.'B. MacGregor.
„ E. G. Sutton.	„ G. E. M. Meadows.
„ R. G. Tewson.	„ W. I. Moberly.
„ A. F. F. Thomas.	„ C. J. C. Molony.
„ K. F. W. Thomas.	„ G. B. Neale.
„ H. G. Trouton.	„ C. G. Nicholls.
„ M. C. Walsh.	„ D. Pettigrew.
„ C. B. Webb.	„ E. A. Rodrigues.
„ H. P. Webster.	„ A. T. Scott.
„ J. R. West.	„ J. F. M. Sumner.
„ A. P. Whitley.	„ E. K. Tarver.
„ H. G. P. Williams.	„ P. N. Thapar.
„ S. H. Wilmot.	„ S. P. P. Thorat.

Lieut. D. R. Venning.	2/Lieut. R. S. Kalha.
„ H. P. E. Waters.	„ I. H. McHarg.
„ S. H. J. Whitehead.	„ C. C. Owens.
2/Lieut. Atta Mohammad Khan.	„ E. G. Prentice.
„ A. C. Bird.	„ H. V. P. Sealy.
„ K. E. Boome.	„ C. A. G. Stewart.
„ T. E. Brownsdon.	„ E. G. Wakefield.
„ P. G. W. M. Coke.	Gentleman Cadet Harbhajan
„ J. D. Crawford.	Singh.
„ R. C. Crowdy.	„ „ H. I. Ahmad.

Gentleman Cadet D. R. Rai.

II.—The Journal.

The Institution publishes a Quarterly Journal in the months of January, April, July and October, which is issued postage free to members in any part of the world. Non-members may obtain the Journal at Rs. 2 annas 8 per number, or Rs. 10 per annum. Advertisement rates may be obtained on application to the Secretary.

III.—Contributions to the Journal.

Articles may vary in length from two thousand to ten thousand words. Payment is made on publication at from Rs. 40 to Rs. 100 in accordance with the value and length of the contribution.

With reference to Regulations for the Army in India, paragraph 204 and King's Regulations, paragraph 522, action to obtain the sanction of His Excellency the Commander-in-Chief to the publication of any article in the Journal of the United Service Institution of India will be taken by the Executive Committee of the Institution.

The Committee reserve to themselves the right to omit any matter which they consider objectionable.

Articles are only accepted on these conditions.

IV.—Reading Room and Library.

The United Service Institution of India is situated in the Mall, Simla, and is open all the year round—including Sundays—from 9. A.M., until sunset. The Reading Room of the Institution is provided with the leading illustrated papers, newspapers, magazines and journals of military, naval and service interest.

There is a well-stocked library in the Institution, from which members can obtain books on loan free, in accordance with the following rules :—

(1) The Library is only open to members and honorary members, who are requested to look upon books as not transferable to their friends.

(2) No book shall be taken from the Library without making the necessary entry in the register. Members residing permanently or temporarily in Simla are requested to enter their addresses.

(3) A member shall not be allowed at one time, more than three books or sets of books.

(4) No particular limit is set as to the number of days for which a member may keep a book, the Council being desirous of making the Library as useful as possible to members ; but if after the expiration of a fortnight from date of issue it is required by any other member, it will be re-called.

(5) Applications for books from members at out-stations are dealt with as early as possible, and books are despatched post free per Registered Parcel Post. They must be returned carefully packed per Registered Parcel Post within one month of date of issue.

(6) If a book is not returned at the end of one month, it must be paid for if so required by the Executive Committee. Lost and defaced books shall be replaced at the cost of the member to whom they were issued. In the case of lost books which are out of print, the value shall be fixed by the Executive Committee, and the amount, when received, spent in the purchase of a new book.

(7) The issue of a book under these rules to any member implies the latter's compliance with the rules, and the willingness to have them enforced, if necessary, against him.

(8) The catalogue of the Library is completed to 31st March 1924. Price Rs. 1-8-0. An addendum completed up to 30th September 1927 is available. Price annas 8. A revised up-to-date catalogue is under compilation and will be available for issue toward the end of the current year.

V.—New Books.

BOOKS RECEIVED.

<i>Title.</i>	<i>Published.</i>	<i>Author.</i>
Grant and Lee—A Study in Personality and Generalship	.. 1933 ..	Maj.-Genl. J. F. C. Fuller.
The Statesman's Year Book	.. 1933 ..	..
War in the Air, 1936	.. 1933 ..	Major Helders.
The Official History of Australia in the War, 1914—1918, Vol. IV, The A. F. I. in France, 1917.	1933 ..	C. E. W. Bean.
Generalship—Its Diseases and Their Cure.	1933 ..	Maj.-Genl. J. F. C. Fuller.
Thirty-Five Years, 1874—1909	.. 1933 ..	H. Spencer Wilkinson.
Egypt Since Cromer 1904—1919, Vol. I	1933 ..	Lord Lloyd.
Official History of the Great War, Operations in Macedonia to the Spring of 1917, Vol. I.	1933 ..	Capt. Cyril Falls and A. F. Becke.
Storm Over India	.. 1933 ..	Henry J. Greenwall.
Napoleon Passes	.. 1933 ..	Conal O'Riordan.
The Staff College Examination Lecture Series.	1933 ..	Lt.-Col. B. C. Denning.
The Coming Struggle for Power	.. 1932 ..	John Strachey.
The Queen and Mr. Gladstone	.. 1933 ..	P. Guedalla.
The Eclipse of British Sea Power	.. 1933 ..	Sir Archibald Hurd.
The Monetary Problems of India	.. 1933 ..	L. C. Jain.
The Great Illusion	.. 1933 ..	Norman Angell.
The Science of War 1891—1903	.. 1933 ..	Col. G. F. R. Henderson.
Hot Air in Cold Blood	.. 1933 ..	Brig Genl. G. Livingstone.
The Concise Ludendorff Memoirs, 1914—18	.. 1933 ..	Ludendorff.
War Memoirs, Vol. I.	.. 1933 ..	David Lloyd George.
The Life of Joseph Chamberlain, 1885—1895, Vol. II.	.. 1933 ..	J. L. Garvin.
Russia and Asia	.. 1933 ..	Lobanov-Rostovsky.
The Tactics and Strategy of the Great Duke of Marlborough	.. 1933 ..	Hilaire Belloc.

BOOKS ON ORDER.

The British Commonwealth of Nations	..	Duncan Hall.
New Imperial Ideals	..	Stokes.
Marlborough, His Life and Times, Vol. I.	..	Winston Churchill.
Storm U. S. A.	..	Claude Cockburn.
Peacemaking 1919	..	Harold Nicolson.
Napoleon III. The Modern Emperor	..	Robert Sencourt.
The Life of Wellington	..	Sir John Fortescue.
Poland	..	Roman Dyboski.

VI.—Promotion Examinations.*(a) Campaigns.*

The following table shows the campaigns on which military history papers will be set from October 1933 for Lieutenants for promotion to Captain in sub-head *b* (iii) and for Captains for promotion to Major in sub-head *d* (iii), with a list of the books recommended for the study of each :—

<i>Dates of Examination.</i>	<i>Campaigns.</i>	<i>Books recommended.</i>
October 1933 ..	Egypt and Palestine, as	"History of the Great
March 1934	covered by the "History	War—Military Opera-
	of the Great War—Mili-	tations—Egypt and
	tary Operations,—Egypt	Palestine, Vol. II,
	and Palestine, Vols. I &	Parts I & II " (Cyril
	II.	Falls).
		"The Palestine Cam-
		paign " (Wavell).
March 1934 ..	France and Belgium,	"Official History of
October 1934	1914 ; up to and in-	the Great War—Mili-
March 1935	cluding the Aisne.	tary Operations—France
		and Belgium, 1914, Vol.
		I." "40 days in 1914 "
		(Maurice).
October 1934 ..	Mesopotamia, up to	"Official History of
March 1935	and including the cap-	the Great War—Mili-
October 1935	ture of Kut-al-Amara,	tary Operations—Meso-
	October 1915.	potamia, Vol. I."
		"Brief History of the
		Mesopotamian Cam-
		paign " (Evans). "Ti-
		gris Gunboats " (Nunn).

(b) Other Subjects.

In addition to the manuals and regulations mentioned in K. R. and R. A. I., the following books are recommended :—

"Modern Military Administration, Organization and Transportation" (Harding-Newman).

"Military Organization and Administration," 1932 (Lindsell).

"A. & Q. or Military Administration in War" (Lindsell).

- "Military Law," 1932 (Banning).
- "The Defence of Duffers' Drift," 1929 (Swinton).
- "Tactical Schemes with Solutions, Series I and II" (Kirby and Kennedy).
- "Imperial Military Geography" (Cole).
- "Elements of Imperial Defence" (Boycott).
- "Changing Conditions of Imperial Defence" (Cole).

VII.—Staff College Examination.—(See Staff College (Camberley) Regulations 1930, obtainable from the Manager of Publications, Delhi or Calcutta).

(a) *Campaigns.*

The following campaigns have been set for the Staff College Entrance Examination :—

Strategy of—

Napoleon's Campaign of 1796 in Italy.

Waterloo Campaign.

Peninsula Campaign up to and including the Battle of Salamanca.

The strategy and broad tactical lessons of—

The American Civil War.

Russo-Japanese War up to and including the Battle of Liao-Yang.

The Great War in France, Belgium, Mesopotamia, the Dardanelles and Palestine, including a knowledge of the influence on the strategy in these areas of the events in other theatres of the War.

The East Prussian Campaign, 1914.

The strategy and tactics of—

The Palestine Campaign from 9th November 1917 to the end of the War.

The action of the British Expeditionary Force in France and Belgium up to and including the Battle of the Aisne.

The 3rd Afghan War, 1919.

(b) The following books are recommended for the above campaigns :—

(i) *The Strategy of Napoleon's Campaign in Italy, 1796.*

Rise of General Buonaparte (Spencer Williamson).

Principles of War (Foch).

II.

The Great War of 1914—18 (Aston).

The Real War (Liddell Hart).

The World Crisis (Winston Churchill).

Brief History of the Mesopotamian Campaign (Evans).

The Palestine Campaign (Wavell).

(vii) *The Strategy and Broad Tactical Lessons of the East Prussian Campaign, 1914.*

Tannenberg—First 30 days in East Prussia (Ironsides).

The World Crisis, Eastern Front, 1931 (Winston Churchill).

The Real War (Liddell Hart).

(viii) *The Strategy and Tactics of the Palestine Campaign from 9th November 1917 to the end of the War.*

The Official History, Military Operations, Egypt and Palestine, from June 17th to the end of the War, Vol. II, Parts I and II.

The Palestine Campaign (Wavell).

(ix) *The Strategy and Tactics of the action of the British Expeditionary Force in France and Belgium up to and including the Battle of the Aisne.*

The Official History, Military Operations, France and Belgium, Vol. I.

40 Days in 1914 (Maurice).

Liaison, 1914 (E. L. Spears).

(x) *The Strategy and Tactics of the 3rd Afghan War, 1919.*

The Official Account (General Staff, India, 1926).

(c) In addition to the above, the following books are recommended for the various subjects :—

(i) *Strategy and Tactics.*

Soldiers and Statesmen (F. M. Sir W. Robertson).

Governments and War (Maurice).

British Strategy (Maurice).

Lectures on F. S. R. II (Fuller).

Lectures on F. S. R. III (Fuller).

War and Western Civilization, 1832—1932 (Fuller).

The British Way in Warfare (Liddell Hart).

Military History for the Staff College Entrance Examination (Sheppard).

In the Wake of the Tank (Martel).

Tactical Schemes with Solutions, Series I and II (Kirby and Kennedy).

Passing it on (Genl. Sir A. Skeen).

Report of the Dardanelles Commission.

(ii) Organization, Administration and Transportation.

Military Organization and Administration, 1932 (Lindsell).

A. & Q. or Military Administration in War (Lindsell).

Modern Military Administration, Organization and Transportation (Harding-Newman).

Administrative Schemes with Solutions (Kirby and Murison).

Outline of the Development of the British Army (Hastings-Anderson).

Short History of the British Army to 1914 (Sheppard).

The Annual Army Estimates of Effective and Non-Effective Services (H. M. S. O.).

Notes on the Land Forces of the British Dominions, Colonies, Protectorates and Mandated Territories.

The Statesman's Year Book.

Army List.

League of Nations : Armaments Year Book, 1932 (Special Edition).

War Office Official Handbooks of Foreign Armies.

Declaration of British Disarmament Policy, 1932.

Commonsense about Disarmament (Lefebure).

(iii) Military Law.

Military Law, 1932 (Banning).

(iv) The History and Organization of the Empire.

Short History of the British Commonwealth (Ramsay).

Short History of British Expansion (Williamson).

British Empire (Basil Williams).

General Survey of the History of India (Sir Verney Lovett).

India in 1929-30, 1930-31, 1931-32.

Problem of the N.-W. F., 1890—1908, with a survey of policy since 1849 (Davies).

Modern Egypt (Cromer, 1908).

Egypt since Cromer, Vol. I. (Lord Lloyd).

The History of Canada (W. L. Grant).

The Union of South Africa (R. H. Brand).

History of the Australasian Colonies (Jenks).

Imperial Military Geography (Cole).

Imperial Communications (Wakely).

Changing Conditions of Imperial Defence (Cole).

Elements of Imperial Defence (Boycott).

VIII.—Schemes, etc.

Efforts are being made to compete with demands for tactical schemes from officers working for the Staff College Examination by introducing as many new schemes as possible. The Institution is now in possession of the complete set of schemes with solutions set at the 1933 Army Headquarters Staff College Course. These as well as *Precis of Lectures* can be supplied at annas eight per copy plus postage. If maps are required, a charge of Rs. 2 extra is charged.

In order to simplify their issue, the schemes have been classified as follows. When ordering, members are requested to give the subject of the schemes, etc., required.

STAFF COLLEGE SERIES, 1933.

(A)—Tactical Papers.

Continuous Exercise No. 1 "March Orders," with solution.

Continuous Exercise No. 2 "Operation Instructions," with solution.

Continuous Exercise No. 3 "Military Appreciation," with solution.

Continuous Exercise No. 4 "Attack Orders," with solution.

Continuous Exercise No. 5 "Defence Orders," with solution.

Strategy and Tactics—

Withdrawal Scheme.

Counter-Attack Scheme.

Attack Scheme.

Mountain Warfare Scheme.

Cavalry Exercise.

NOTE.—A number of schemes (with solutions) set for the 1932 A. H. Q. Staff College Course (referred to in the July 1933 number of the Journal) can be supplied at the same rate, *i.e.*, annas eight per copy, plus Rs. 2/- per map, if required.

(B)—Precis of Lectures, etc.

Military History.

The East Prussian Campaign, 1914 (1931).

The History and Organization of the Empire (1932).

Tactical.

Military Evolution and the Influence of Modern Inventions on Warfare (1932).

Tactical Lessons of the Great War (1932).

Cavalry, I (1932).

Cavalry, II (1932).

Artillery, I (1932).

Artillery, II (1932).

Engineers, I & II (1932).

Tactical Employment of Tanks (1932).

Chemical Warfare (1932).

Night Operations (1932).

Frontier Warfare (1932).

Air Co-operation (1932).

Military Law.

Military Law, I (1932).

Military Law, II (1932).

Military Law, III (1932).

Military Law, IV (1932).

Specimen Military Law Paper (1932).

Organization, Administration and Transportation. Mobilization (1932). Reinforcements in War (1932).

Organization, Administration and Transportation (Peace)—

Specimen Examination Paper with notes (1932).

Organization, Administration and Transportation (War)—Specimen Examination Paper (1932).

" Q " Services in Peace (1932).

Movements (1932).

Movements—Specimen Examination Paper (1932).

Supply of a Division in War (1932).

Supply Problem—Specimen Examination Paper (1932).

General.

Notes on Military Writing (1932).

Essay—Specimen Paper (1932).

Hints on Working for Examinations (1930).

IX.—Historical Research.

The U. S. I. is prepared to supply members and units with type-written copies of old Indian Army List pages, at the rate of Rs. 2 per type-written page.

The staff of the Institution is always willing to assist units, authors of regimental histories and members by searching the many old military records in the Library on their behalf.

X.—The MacGregor Memorial Medal.

1. The MacGregor Memorial Medal was founded in 1888 as a memorial to the late Major-General Sir Charles MacGregor. The medals are awarded for the best military reconnaissances or journeys of exploration of the year.

2. The following awards are made annually in the month of June:—

(a) For officers—British or Indian—silver medal.

(b) For soldiers—British or Indian—silver medal with Rs. 100 gratuity.

3. For especially valuable work, a gold medal may be awarded in place of one of the silver medals, or in addition to the silver medals, whenever the administrators of the fund deem it desirable. Also the

Council may award a special additional silver medal, without gratuity, to a soldier, for especially good work.

4. The award of medals is made by His Excellency the Commander-in-Chief, as Vice-Patron, and the Council of the United Service Institution, who were appointed administrators of the Fund by the MacGregor Memorial Committee.

5. Only officers and soldiers belonging to the Army in India (including those in civil employ) are eligible for the award of the medal.*

6. The medal may be worn in uniform by Indian soldiers on ceremonial parades, suspended round the neck by the ribbon issued with the medal.†

7. Personal risk to life during the reconnaissance or exploration is not a necessary qualification for the award of the medal; but in the event of two journeys being of equal value, the man who has run the greater risk, will be considered to have the greater claim to the reward.

8. When the work of the year has either not been of sufficient value, or has been received too late for consideration before the Council Meeting, the medal may be awarded for any reconnaissance during previous years considered by His Excellency the Commander-in-Chief to deserve it.

MACGREGOR MEMORIAL MEDALISTS.

(With rank of officers and soldiers at the date of the Award).

1889 .. BELL, Col. M. S., V.C., R.E. (specially awarded a gold medal).

1890 .. YOUNGHUSBAND, Capt. F. E., King's Dragoon Guards.

1891 .. SAWYER, Maj. H. A., 45th Sikhs.

RAMZAN KHAN, Havildar, 3rd Sikhs.

* N.B.—The terms "officer" and "soldier" include those serving in the British and Indian armies and their reserves, also those serving in Auxiliary Forces, such as the Indian Auxiliary and Territorial Forces and Corps under Local Governments, Frontier Militia, Levies and Military Police, also all ranks serving in the Royal Air Force, Indian Air Force, Royal Indian Marine and the Indian States Forces.

† Replacements of the ribbon may be obtained on payment from the Secretary, U. S. I., Simla.

MACGREGOR MEMORIAL MEDALLISTS—(contd.).

- 1892 .. VAUGHAN, Capt. H. B., 7th Bengal Infantry.
JAGGAT SINGH, Havildar, 19th Punjab Infantry.
- 1893 .. BOWER, Capt. H., 17th Bengal Cavalry (specially awarded a gold medal).
FAZAL DAD KHAN, Dafadar, 17th Bengal Cavalry.
- 1894 .. O'SULLIVAN, Maj. G. H. W., R.E.
MULL SINGH, Sowar, 6th Bengal Cavalry.
- 1895 .. DAVIES, Capt. H. R., Oxfordshire Light Infantry.
GANGA DYAL SINGH, Havildar, 2nd Rajputs.
- 1896 .. COCKERILL, Lieut. G. K., 28th Punjab Infantry.
GHULAM NABI, Sepoy, Q. O. Corps of Guides.
- 1897 .. SWAYNE, Capt. E. J. F., 10th Rajput Infantry.
SHAHZAD MIR, Dafadar, 11th Bengal Lancers.
- 1898 .. WALKER, Capt. H. B., Duke of Cornwall's Light Infantry.
ADAM KHAN, Havildar, Q. O. Corps of Guides.
- 1899 .. DOUGLAS, Capt. J. A., 2nd Bengal Lancers.
MIHR DIN, Naik, Bengal Sappers and Miners.
- 1900 .. WINGATE, Capt. A. W. S., 14th Bengal Lancers.
GURDIT SINGH, Havildar, 45th Sikhs.
- 1901 .. BURTON, Maj. E. B., 17th Bengal Lancers.
SUNDAR SINGH, Colour Havildar, 31st Burmah Infantry.
- 1902 .. RAY, Capt. M. R. E., 7th Rajput Infantry.
TILBIR BHANDARI, Havildar, 9th Gurkha Rifles.
- 1903 .. MANIFOLD, Lieut.-Col. C. C., I.M.S.
GHULAM HUSSAIN, Lance-Dafadar, Q. O. Corps of Guides.
- 1904 .. FRASER, Capt. L. D., R.G.A.
MOGHAL BAZ, Dafadar, Q. O. Corps of Guides.
- 1905 .. RENNICK, Maj. F., 40th Pathans (specially awarded a gold medal).
MADHO RAM, Havildar, 8th Gurkha Rifles.
- 1906 .. SHAHZADA AHMAD MIR, Risaldar, 36th Jacob's Horse.
GHAFUR SHAH, Lance-Naik, Q. O. Corps of Guides.
- 1907 .. NANGLE, Capt. M. C., 92nd Punjabis.
SHEIKH USMAN, Havildar, 103rd Mahratta Light Infantry.
- 1908 .. GIBBON, Capt. C. M., Royal Irish Fusiliers.
MALANG, Havildar, 56th Punjab Rifles.
- 1909 .. MUHAMMAD RAZA, Havildar, 106th Pioneers.
- 1910 .. SYKES, Maj. P. M., C.M.G., late 2nd Dragoon Guards (specially awarded a gold medal).
TURNER, Capt. F. G., R.E.
KHAN BAHADUR SHER JUNG, Survey of India.
- 1911 .. LEACHMAN, Capt. G. E., The Royal Sussex Regiment.
GURMUKH SINGH, Jemadar, 93rd Burmah Infantry.

MACGREGOR MEMORIAL MEDALLISTS—(contd.).

- 1912 .. PRITCHARD, Capt. B. E. A., 83rd Wallajahabad Light Infantry (specially awarded a gold medal).
WILSON, Lieut. A. T., c.m.g., 32nd Sikh Pioneers.
MOHIBULLA, Lance-Dafadar, Q. V. O. Corps of Guides.
- 1913 .. ABBAY, Capt. B. N., 27th Light Cavalry.
SIRDAR KHAN, Sowar, 39th (K. G. O.) Central India Horse.
WARATONG, Havildar, Burmah Military Police (specially awarded a silver medal).
- 1914 .. BAILEY, Capt. F. M., I.A. (Political Department).
MORSHEAD, Capt. H. T., R.E.
HAIDAR ALI, Naik, 106th Hazara Pioneers.
- 1915 .. WATERFIELD, Capt. F. C., 45th Rattray's Sikhs.
ALI JUMA, Havildar, 106th Hazara Pioneers.
- 1916 .. ABDUR RAHMAN, Naik, 21st Punjabis.
ZARGHUN SHAH, Havildar, 58th Rifles (F.F.), (specially awarded a silver medal).
- 1917 .. MIAN AFRAZ GUL, Sepoy, Khyber Rifles.
- 1918 .. NOEL, Capt. E. W. C. (Political Department).
- 1919 .. KEELING, Lieut.-Colonel E. H., m.c., R.E.
ALLA SA, Jemadar, N.-W. Frontier Corps.
- 1920 .. BLACKER, Capt. L. V. S., Q. V. O. Corps of Guides.
AWAL NUR, C. Q. M. Havildar, 2nd Bn., Q. V. O. Corps of Guides. (Special gratuity of Rs. 200).
- 1921 .. HOLT, Maj. A. L., Royal Engineers.
SHER ALI, Sepoy, No. 4952, 106th Hazara Pioneers.
- 1922 .. ABDUL SAMAD SHAH, Capt., o.b.e., 31st D.C. O. Lancers.
NUR MUHAMMAD, Lance-Naik, 1st Guides Infantry, F. F.
- 1923 .. BRUCE, Capt. J. G., 2/6th Gurkha Rifles.
SOHBAT, Head Constable, N.-W. F. Police.
HARI SINGH THAPA, Survey Department (specially awarded a silver medal).
- 1924 .. RAHMAT SHAH, Havildar, I.D.S.M., N.-W. F. Corps.
GHULAM HUSSAIN, Naik, N.-W. F. Corps.
- 1925 .. SPEAR, Capt. C. R., 5/13th Frontier Force Rifles.
JABBAR KHAN, Naik, 5/13th Frontier Force Rifles.
- 1926 .. HARVEY-KELLY, Maj. C. H. G. H., d.s.o., 4/10th Baluch Regiment.
- 1927 .. LAKE, Maj. M. C., 4/4th Bombay Grenadiers.
- 1928 .. BOWERMAN, Capt. J. F., 4/10th D. C. O. Baluch Regiment.
MUHAMMAD KHAN, Havildar, Zhob Levy Corps.
- 1929 .. ABDUL HANAN, Naik, N.-W. F. Corps.
GHULAM ALI, Dafadar, Guides Cavalry (specially awarded a silver medal).
- 1930 .. GREEN, Capt. J. H., 3/20th Burmah Rifles.

MACGREGOR MEMORIAL MEDALLISTS—(*concl'd.*).

- 1931 .. O'CONNOR, Capt. R. L., 1/9th Jat Regiment.
KHIAL BADSHAH, Naik, 1/13th Frontier Force Rifles.
- 1932 .. BIRNIE, Capt. E. St. J., Sam Browne's Cavalry.
SHIB SINGH NEGI, No. 4013, Rifleman, 10/18th Royal Garhwal Rifles.
- 1933 .. ABDUL GHAFUR, Havildar, K.G.O., Bengal Sappers and Miners.

UNITED SERVICE INSTITUTION OF INDIA.

PRIZE ESSAY GOLD MEDALLISTS.

(*With Rank of Officers at the date of the Essay.*)

- 1872 .. ROBERTS, Lieut.-Col. F. S., V.C., C.B., R.A.
- 1873 .. COLQUHOUN, Capt. J. S., R.A.
- 1874 .. COLQUHOUN, Capt. J. S., R.A.
- 1879 .. ST. JOHN, Maj. O. B. C., R.E.
- 1880 .. BARROW, Lieut. E. G., 7th Bengal Infantry.
- 1882 .. MASON, Lieut. A. H., R.E.
- 1883 .. COLLEN, Maj. E. H. H., S.C.
- 1884 .. BARROW, Capt. E. G., 7th Bengal Infantry.
- 1887 .. YATE, Lieut. A. C., 27th Baluch Infantry.
- 1888 .. MAUDE, Capt. F. N., R.E.
YOUNG, Maj. G. F., 24th Punjab Infantry (specially awarded a silver medal).
- 1889 .. DUFF, Capt. B., 9th Bengal Infantry.
- 1890 .. MAGUIRE, Capt. C. M., 2nd Cavy., Hyderabad Contingent.
- 1891 .. CARDEW, Lieut. F. G., 10th Bengal Lancers.
- 1893 .. BULLOCK, Maj. G. M., Devonshire Regiment.
- 1894 .. CARTER, Capt. F. C., Northumberland Fusiliers.
- 1895 .. NEVILLE, Lieut.-Col. J. P. C., 14th Bengal Lancers.
- 1896 .. BINGLEY, Capt. A. H., 7th Bengal Infantry.
- 1897 .. NAPIER, Capt. G. S. F., Oxfordshire Light Infantry.
- 1898 .. MULLALY, Maj. H., R.E.
CLAY, Capt. C. H., 43rd Gurkha Rifles (specially awarded a silver medal).
- 1899 .. NEVILLE, Col. J. P. C., S.C.
- 1900 .. THUILLIER, Capt. H. F., R.E.
LUBBOCK, Capt. G., R.E. (specially awarded a silver medal).
- 1901 .. RANKEN, Lieut.-Col. G. P. P., 46th Punjab Infantry.
- 1902 .. TURNER, Capt. H. H. F., 2nd Bengal Lancers.
- 1903 .. HAMILTON, Maj. W. G., D.S.O., Norfolk Regiment.
BOND, Capt. R. F. G., R.E. (specially awarded a silver medal).
- 1904 .. MACMUNN, Maj. G. F., D.S.O., R.F.A.

PRIZE ESSAY GOLD MEDALLISTS—(concl'd.).

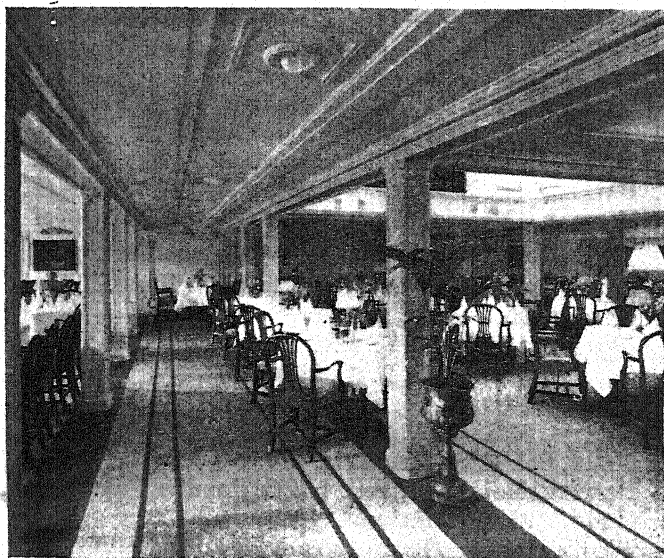
- 1905 .. COCKERILL, Maj. G. K., Royal Warwickshire Regiment.
 1907 .. WOOD, Maj. E. J. M., 99th Deccan Infantry.
 1908 .. JEUDWINE, Maj. H. S., R.A.
 1909 .. MOLYNEUX, Maj. E. M. J., D.S.O., 12th Cavalry.
 ELSMIE, Maj. A. M. S., 56th Rifles, F. F. (specially awarded a silver medal).
 1911 .. Mr. D. PETRIE, M.A., Punjab Police.
 1912 .. CARTER, Maj. B. C., The King's Regiment.
 1913 .. THOMSON, Maj. A. G., 58th Vaughan's Rifles (F. F.).
 1914 .. BAINBRIDGE, Lieut.-Col. W. F., D.S.O., 51st Sikhs (F. F.).
 NORMAN, Maj. C. L., M.V.O., Q. V. O. Corps of Guides (specially awarded a silver medal).
 1916 .. CRUM, Maj. W. E., V.D., Calcutta Light Horse.
 1917 .. BLAKER, Maj. W. F., R.F.A.
 1918 .. GOMPERTZ, Capt. A. V., M.C., R.E.
 1919 .. GOMPERTZ, Capt. M. L. A., 108th Infantry.
 1920 .. KEEN, Lt.-Col. F. S., D.S.O., 2/15th Sikhs.
 1922 .. MARTIN, Maj. H. G., D.S.O., O.B.E., R.F.A.
 1923 .. KEEN, Col. F. S., D.S.O., I.A.
 1926 .. DENNYS, Maj. L. E., M.C., 4/12th Frontier Force Regiment.
 1927 .. HOGG, Maj. D. M.C.A., M.C., R.E.
 1928 .. FRANKS, Maj. K. F., D.S.O., 5th Royal Mahrattas.
 1929 .. DENNYS, Maj. L. E., M.C., 4/12th Frontier Force Regiment.
 1930 .. DURNFORD, Maj. C. M. P., 4/6th Rajputana Rifles.
 1931 .. FORD, Lt.-Col. G. N., 2/5th Mahratta Light Infantry.
 1932 .. THURBURN, Lt. R. G., The Cameronians (Scottish Rifles).

NOTICE.

The Council has decided—

- (i) In order to assist Officers suffering from the cut in pay, payment of the Entrance Fee be suspended during 1933.
- (ii) With effect from the 1st January 1934, members of ten years' standing who retire from the Service may continue their membership on payment of the reduced subscription of s10/6 per annum.
- (iii) Cadets of the Indian Military Academy are eligible for membership of the Institution.
- (iv) Officers of the Indian States Forces are eligible to compete in the Gold Medal Prize Essay Competition.
- (v) Officers and other ranks of the Royal Air Force, Royal Indian Marine and Indian Air Force, are eligible for the award of the MacGregor Memorial Medal.

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